federal register

Friday
March 13, 1992

Part II

Department of Commerce

National Oceanic and Atmospheric Administration

15 CFR Chapter IX

Natural Resource Damage Assessments; Advance Notice of Proposed Rulemaking

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

15 CFR Chapter IX

Natural Resource Damage Assessments

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: NOAA is providing a status report concerning the natural resource damage assessment regulations being developed under section 1006 of the Oil Pollution Act of 1990 and is seeking additional comment concerning the content and procedures of the future regulations.

DATES: Written comments should be received no later than April 27, 1992.

ADDRESSES: Written comments are to be submitted to Randall Luthi, Project Manager, or Linda Burlington, Assistant Project Manager, Damage Assessment Regulations Team (DART), 6001 Executive Boulevard, room 422, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Randall Luthi, Office of General Counsel, NOAA, telephone (202) 377–1400, or Linda Burlington, Office of General Counsel, DART, 6001 Executive Boulevard, room 422, Rockville, Maryland 20852, telephone (301) 227–6332.

SUPPLEMENTARY INFORMATION: The Oil Pollution Act of 1990 (OPA), 33 U.S.C. 2701 *et seq.*, provides for the prevention of, liability for, removal of and compensation for the discharge, or substantial threat of discharge, of oil into or upon the navigable waters of the United States, adjoining shorelines, or the Exclusive Economic Zone. Section 1006(e) requires the President, acting through the Under Secretary of Commerce for Oceans and Atmosphere, to develop regulations establishing procedures for natural resource trustees in the assessment of damages for injury to, destruction of, loss of, or loss of use of natural resources covered by OPA. Section 1006(b) provides for the designation of Federal, State, Indian tribal and foreign natural resource trustees to determine resource injuries, assess natural resource damages (including the reasonable costs of assessing damages), present a claim, recover damages and develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship.

NOAA has published two **Federal Register** Notices, 55 FR 53478 (December 28, 1990), and 56 FR 8307 (February 28, 1991), requesting information and comments on approaches to developing damage assessment procedures. NOAA conducted a public meeting on March 20, 1991, to allow additional public participation into the process and held four regional workshops during 1991 in Rockville, Maryland; Houston, Texas; San Francisco, California; and Chicago, Illinois to learn of regional concerns in coastal and inland waters. One workshop held in Alexandria, Virginia, provided a forum for early discussions of various economic issues likely to be raised during the damage assessment rulemaking process. This Notice briefly summarizes the written comments received by the agency, summarizes many of the specific issues raised at the public meeting and workshops, identifies NOAA's possible position on many of the issues and invites further comment upon the issues addressed in this Notice. NOAA emphasizes that the possible positions indicated within this Notice are for the purpose of inviting discussion and comment and do not necessarily indicate any final positions or definitive assessment procedures. Following a thorough review of all comments received as a result of this Notice, in addition to those already received, NOAA will propose the assessment procedures by the statutory deadline of August 18, 1992.

The brief summary of oral and written comments is provided for background information and to indicate to the reader the range of views that have been expressed concerning possible assessment procedures. As such, the comments are not responded to by NOAA in this Notice. However, all comments received will be specifically addressed when the assessment/restoration procedures are proposed.

Introduction

In addition to specific issues identified in the earlier FR notices and the public meeting, NOAA raised various issues and possible positions during the workshops. This Notice provides a summary of information, concerns, recommendations received thus far in this rulemaking process and possible NOAA positions concerning certain assessment activities. Discussion points for the workshops serve as headings in this notice. These points include:

—Trustee Coordination
—Coordination with Response Agencies
—Coordination with the Public
—Role of the Responsible Party
—Preassessment Phase
—Early Resource Protection and Restoration Actions
—Baseline Determination, Early Sampling and Data Collection
—Coordination with Economists, and Economic Issues
—Range of Assessment Procedures
—Injury and Pathway Determination
—Restoration Guidance and Costs
—Coordination with Legal Counsel
—Coordination with State Law
—Use of Sums Recovered
—Definitions for OPA Regulations

These issues are certainly not inclusive of all of the issues to be determined in this rulemaking process, nor do they represent all of the issues involved in a natural resource damage assessment. Therefore, some initial explanation of how the agency is currently viewing these issues might be helpful in order to generate pertinent comments. The concepts and issues identified in this Notice represent the issues the agency considers important to discuss before the regulations are proposed. Many of the topics in this Notice are procedural and involve more planning than do technical aspects of an assessment. These topics (including Trustee Coordination, Coordination with Response Agencies, Coordination with the Public, Coordination with State Law, Coordination with Legal Counsel and the Role of the Responsible Party) are concepts that will essentially "set the tone" for any damage assessment. Many aspects of these issues apply to nearly all spills and questions of "who is going to do what" can be decided, or at least planned for, in advance.

The Preassessment Phase; Early Resource Protection and Restoration Actions; Baseline Determination, and Early Sampling and Data Collection, represent activities more technical and scientific in nature and are indicative of activities that should be completed in the first few days and weeks following a spill. Also in this scientific and technical category is Injury and Pathway Determination, which would play a vital role in any oil spills requiring a comprehensive damage assessment. This topic is being brought forward for additional comment at this time because of its complexity and overall importance to any damage assessment scheme.

The Range of Assessment Procedures section indicates the various assessment procedures currently being considered by NOAA in this rulemaking. After these procedures are selected and fully developed, they will be submitted for additional public review and comment.

OPA requires the measure of damages to be the costs of restoration, rehabilitation, replacement or acquisition of the equivalent resources, plus the diminution in value of those resources, pending restoration. Therefore, the Coordination with Economists and Economic Issues and Restoration Guidance and Costs sections represent very important aspects of this rulemaking and are being presented at this time to generate additional comments and discussion before the agency proposes the assessment regulations.

The Use of Sums Recovered section applies to the trustees' placement and use of any monetary recoveries received through OPA. Finally, the Definitions are provided for information and comment.

The agency recognizes that there is a current set of natural resource damage assessment procedures, located at 43 CFR part 11, that have been promulgated by the Department of the Interior, authorized under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. 9601 *et seq.* These regulations establish an administrative process as well as procedures for the assessment of damages for injuries to natural resources affected by a release of a hazardous substance or a discharge of oil. These regulations were formulated through an extensive rulemaking procedure and are the current standard for all damage assessments (both oil and hazardous substances) until the procedures in this rulemaking process are developed specifically for oil. After the OPA regulations are promulgated, the 43 CFR part 11 procedures will still be used to assess damages for natural resource injuries resulting from a release of a hazardous substance.

The procedures identified in 43 CFR part 11 have now been tested in the field and provide a solid base from which to identify assessment procedures to be promulgated under OPA. NOAA has asked for comment on the applicability to oil spills of 43 CFR part 11, as modified by the court decisions of *Ohio* v. *U.S. Department of the Interior*, 880 F.2d 432 (DC Cir. 1989) and *Colorado* v. *U.S. Department of the Interior*, 880 F.2d 481 (DC Cir. 1989). While this OPA rulemaking effort is separate and distinct from the existing regulation, it is possible that concepts from the existing regulations could be adopted, adapted or added to by NOAA in developing the OPA assessment procedures. In addition, NOAA and the Department of the Interior are coordinating their respective rulemakings to ensure consistency, when practicable, for the trustees and responsible parties in conducting natural resource damage assessments as a result of either a discharge of oil or release of a hazardous substance.

The starting point for NOAA's workshops and this Notice is some aspects of the existing natural resource damage assessment regulations. NOAA's discussion of the selected existing procedures is not intended to be exhaustive, nor to suggest changes to the existing regulations, but only to provide a point of departure for discussion of selected issues discussed in this Notice. Each section of today's Notice begins with a summary of the current damage assessment regulations as background information.

Today's Notice: (1) Summarizes the process for each issue under the current regulations; (2) summarizes comments received to date through the NOAA rulemaking and workshop process; (3) provides NOAA's possible proposal on each issue for comment and (4) in certain cases, provides additional issues for comment.

Discussion of Issues

Trustee Coordination

Current Status Under 43 CFR Part 11

The existing procedures suggest the designation of a lead authorized official (lead trustee) whenever multiple trustees are conducting a joint assessment. Designation of a lead trustee does not relieve the other trustees of their responsibility to protect and manage natural resources, but ensures coordination among the various trustees to avoid duplication of effort and/or gaps in the assessment process. The lead trustee, therefore, should consult with all affected trustees and could function as a decisionmaker when the trustees are unable to resolve a dispute.

Summary of Comments

Both written comments and discussions in the workshops reflected a consensus for coordination of many of the trustee activities. Most agreed that the natural resource trustees should anticipate the possibility of a discharge of oil that could affect resources under their jurisdiction and engage in pre-spill planning for such events.

Some commenters suggested that since OPA requires the formulation of area and regional contingency plans for response purposes, trustees could develop pre-spill plans on similar regional or local geographical bases simultaneously. Trustees could coordinate pre-spill planning and develop a Memorandum of Understanding (MOU) that assigns, or establishes the criteria for assigning, assessment responsibilities among the trustees. In addition, these plans should provide for the selection of a trustee's representative; selection of a lead administrative trustee; notification of the various trustees; coordination with the response agencies; coordination among trustees including their scientific, legal and economic staffs; development of an assessment and restoration plan including coordination of data gathering and other assessment studies; communication with the public; development of procedures governing receipt, management and allocation of funds for a given spill; and monitoring restoration of the natural resources. One commenter suggested that pre-spill planning should include identification of requirements of other regulatory or statutory schemes such as workers' health and safety provisions of the Occupational Safety and Health Act of 1970 (OSHA), 29 U.S.C. 651 *et seq.*

Finally, commenters indicated that lead administrative trustee duties should include: Scheduling meetings of the working groups or committees; preparing agendas; procuring space; coordinating pre-assessment data collection; and maintaining records. A lead administrative trustee should not have arbitration or veto authority over other trustees.

Discussion and Initial Proposal

In many spills, trustees have been able to reach agreement on coordinating assessment and restoration activities. In light of that experience, NOAA may well likely propose that Federal, State, Tribal and foreign trustees in logical geographical areas develop pre-spill plans. This planning process may be instituted through a general MOU between trustees on a state-by-state basis or on a local area or regional basis.

In order to facilitate discussion of trustee coordination, NOAA has provided a draft MOU that has been developed among Federal trustees for review and comment that could establish a coordination framework for trustees for pre-spill planning. This draft MOU is presented in appendix I of this notice. Trustees could develop general plans with provisions for specific areas such as bays, ports, waterways or areas of special sensitivity concerns. The plans could mirror the areas covered by Regional and/or Area Contingency Plans authorized by OPA under the National Contingency Plan. NOAA seeks additional comments regarding

the identification of appropriate areas for regional and local plans.

Without regulating the exact contents of the plans, NOAA may propose that the plans identify the responsibilities of the co-trustees in the event of a discharge of oil covered by OPA, including, but not limited to: Establishment of standing trustee working groups on a regional or local area basis; designation of a lead administrative trustee agency or provision for criteria for the selection of a lead administrative trustee agency; notification of affected trustees; coordination with response agencies; opportunity for participation by all affected trustees; and decision-making by consensus. The plans should identify: early spill/assessment activities, such as forming technical and scientific working groups; contain protocols for baseline determination, early sampling and data collection; identify resources at risk; provide guidelines for informing the public of assessment activities; and provide for health and safety considerations required by law, such as OSHA. The plans should outline long-range damage assessment and restoration management activities such as development of an assessment and restoration plan; acceptance, maintenance and use of funds available or recovered as a result of the incident; public release of data obtained in the assessment and restoration process; and procedures for contracting for scientific, economic and other services or studies. Trustees will be encouraged to develop the plans in cooperation with the response agencies, potentially responsible parties and groups with environmental expertise. The trustees will provide the opportunity for public review of and comment on these plans.

Whether planned for in advance of a spill or not, when assessments involve more than one trustee, trustees should select a Lead Administrative Trustee. The selection of a Lead Administrative Trustee will be by consensus and can be based on such factors as the trustee with a majority of resources at risk or the ability of a particular trustee agency to provide administrative support. While the Federal trustees are required to select a Lead Administrative Trustee under Executive Order 12777, 56 FR 54757 (October 22, 1991), the OPA regulations may not require that the Lead Administrative Trustee be a Federal agency when non-Federal trustees are involved. Where appropriate, trustees may designate co-Lead Administrative Trustees, consisting of a Federal Lead Administrative Trustee and the State, Tribal or foreign trustee. It is also possible that, under certain circumstances, it might be appropriate for the Lead Administrative Trustee to be a single non-Federal agency. In such cases, the Federal trustees will still select a Federal lead Administrative Trustee, who will coordinate Federal efforts with the Lead Administrative Trustee.

The Lead Administrative Trustee will not have veto or arbitration authority over the other trustees, but should be responsible for activities such as: Scheduling meetings of the trustees working group or committee, preparing agendas, procuring space, etc.; acting as a central contact point for trustee agencies involved in the incident, liaison with the appropriate On Scene Coordinator; coordinating preassessment data gathering and other activities; and establishing and maintaining records for trustees.

Coordination With Response Agencies

Current Status Under 43 CFR Part 11

The current rule incorporates the requirement that trustees be notified by the lead response agency when a potential natural resource injury may exist. Trustees once notified pursuant to section 104(b)(2) of CERCLA, shall coordinate their studies and investigations with the lead response agency.

Summary of Comments

Integration of natural resource damage assessment activities with spill response agencies, i.e, U.S. Coast Guard, EPA and State response agencies, was strongly encouraged in the comments and in workshop discussion. Several of the commenters suggested that information gathered through spill response activities should be shared with the trustees. It would be useful, for example, for the trustees to receive information pertaining to the characteristics of the spilled cargo obtained through the sampling efforts undertaken by the response agency, as well as from the data bases of ships' cargo that are maintained by the Coast Guard. To facilitate the exchange of information, the trustees should identify their data needs to the response agencies as part of pre-spill planning. Furthermore, when trustees need additional data, the Coast Guard could increase sampling efforts, share or split samples or provide the trustees with an opportunity to collect samples in conjunction with response activities on a reimbursable basis. A number of commenters noted, however, that the On Scene Coordinator's (OSC) ability to respond to the spill and collect data necessary to manage the response activities should take precedence over trustee assessment activities. Therefore, the OSC should not share information with the trustees or take additional samples if it would hinder rapid response to the spill. One commenter suggested that the trustee agencies should avoid potential interference with the response agencies by refraining from initiating damage assessment activities until after the response is completed.

Some commenters requested that the response and trustee agencies be notified of spills simultaneously. While some agency representatives expressed a desire to be notified of all spills no matter what the size, others were concerned that notification of all the trustees for every spill would overburden the OSC. To avoid this, some trustees indicated that notification by a FAX form every few days, for example, that listed all reported spills in that region would be sufficient. Other commenters requested that the response agencies consult early with the trustees during a spill in order to ensure that resources are not exposed to additional injury as a result of the cleanup. Another suggestion would require the trustee agency to identify important natural resources that would be impacted by a spill hierarchically in terms of value. The response agency could then develop a clean-up strategy that would address the most valuable resources. Other commenters identified mechanisms to coordinate the natural resource damage assessment activities with the response actions. To avoid duplication, improve communication, more efficiently use personnel and budgets and minimize cleanup impacts on resources, some commenters suggested that the damage assessments could be coordinated by the OSC.

Other commenters noted the possibility for a conflict of interest when the response agency is also a natural resource trustee since response activities could be curtailed to allow more assessment activities. These commenters expressed the need for accountability under this scenario. One of these commenters stated that non-trustee agencies should be given a formal role in both response and cleanup activities.

Commenters suggested that as part of pre-spill planning trustees could identify requirements for personnel and field equipment, and ascertain which of those requirements the response agency can provide. In addition, pre-spill plans could establish communication procedures between the response

agency and the lead administrative trustee, and establish sampling agreements prior to an actual spill, particularly at the local level. Some commenters suggested that the trustees coordinate pre-spill planning within the established response structure of the National Contingency Plan, 40 CFR part 300, i.e., National Response Team, Regional Response Teams and local area committees authorized under OPA. Such pre-spill activities could include participation by the trustee agencies in spill drills sponsored by the response agencies. In the context of spill drills, the trustees could provide their natural resource expertise and technical assistance to the response agencies. Other pre-spill planning activities by the trustees in support of oil spill response could include mapping of sensitive areas and providing input into the sensitive area plans that industry is required to develop. To avoid inhibiting spill response and damage assessment due to the indecision of trustee agencies, pre-spill planning should include internal coordination within each trustee agency.

Discussion and Initial Proposal

OPA covers inland navigable waters as well as coastal areas. From a Federal perspective, as a general rule the U.S. Coast Guard directs response activities in the coastal zone including the Great Lakes. The U.S. EPA directs response activities in the inland zone. See the National Contingency Plan, 55 FR 8815, 8816 (March 8, 1990). State response agencies may also direct response activities.

Effective coordination with the various response agencies necessitates that coordination procedures be established prior to a spill. As stated in the previous section, the regulations may require the trustees to plan and coordinate their activities prior to a spill. Similarly, trustees will be encouraged to either develop pre-spill agreements with the response agencies or attempt to include them in the planning process outlined above. Agreements or joint-plans should address, but are not limited to, the following issues: establishment of communication roles; identification of a trustee and response contact; health and safety requirements; and development of joint activities, i.e., sampling, spill drills, identification of resources of particular concern and information and data sharing.

Trustees recognize that the response agencies should not be unduly hindered by the trustees' requests for use of equipment and/or information. Conversely, response agencies should recognize the trustees as a potential source of information concerning the weather, history and natural resource characteristics of a particular area.

Procedures for the use of the Oil Spill Liability Trust Fund (Fund) for trustee activities is also an issue appropriate for discussion. The Coast Guard has the responsibility for management of the Fund. The fund contains up to one billion dollars, of which $50 million is available on an annual basis, not subject to appropriations, for the costs of response and the initiation of natural resource damage assessments. The activities included under "the initiation of natural resource damages assessments" will be determined in subsequent regulations. The Federal trustees and the Coast Guard are working together to provide the necessary guidance to trustees on this matter as well as on general access to the fund for uncompensated trustee claims.

Coordination with the Public

Current Status Under 43 CFR Part 11

The current rule provides that the public can participate in a natural resource damage assessment by commenting on the Draft Assessment Plan, significant modifications to the Assessment Plan, the Draft Restoration Plan contained in the Assessment Plan (when developed separate from the Assessment Plan) and the Draft Restoration Plan based upon the amount of monies recovered. The public is notified of the availability of documents to review by publication in a paper of general circulation and in the **Federal Register**, where appropriate. The trustee has the discretion to extend the comment period. The current rule also requires that comments and responses be maintained as part of the administrative record.

Summary of Comments

Many commenters noted that OPA requires public involvement with respect to oil spills. Specifically, section 1006(c) directs natural resource trustees to develop and implement plans for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship. Section 1006(c)(5) states that these plans shall be developed and implemented only after adequate public notice, opportunity for a hearing and consideration of all public comment.

Some commenters stated that there should be public participation in each phase of the assessment process, i.e., pre-spill planning through restoration. It was suggested that this participation could be accomplished through the use of oversight committees, consisting of representatives of environmental groups, local governmental officials and other interested individuals. These oversight committees would be in addition to the public meetings and the review and comment periods for the assessment/restoration plans. Having members of the public involved throughout the assessment process would also avoid negotiations by the trustees and responsible party (RP) that might result in less than full compensation to the public for injuries to natural resources. However, others indicated that, since the trustees represent the public, the opportunity for review and comment upon the assessment/restoration plans are sufficient to meet the requirements of OPA.

Some commenters noted that, where circumstances surrounding a spill are too dynamic or the spill is short-lived, it may not be possible to conduct timely public meetings. Such meetings would be so frequent and time consuming that they would drain the staff and budget of both the trustee agencies and private groups. In such cases, it was recommended that local and regional pre-spill plans should identify procedures the trustees will undertake in the event of such a spill. Since the public would be aware of how the trustees will respond to these spills by virtue of the public's involvement in pre-spill planning, separate spill-specific meetings would be unnecessary for many small spills.

Many of those expressing comments were concerned that, due to the possibility of litigation, the data collected during assessments are not made available to the public by those conducting the assessment. Commenters noted that data gathered for an assessment are valuable for understanding environmental processes, toxic effects of oil in the environment and cleanup strategies. Accordingly, some called for a modification of the assessment process to facilitate free exchange of information. Several others suggested that the assessment data be made available to the scientific community for publication in peer-reviewed journals as soon as possible. One commenter even requested that draft materials be made available to the public; however, others suggested that nonvalidated or confidential information should be withheld. One suggested method of sharing data was through the use of an administrative record. This would not only allow greater access to data collected, but would also result in a record that would be judicially

reviewable. Such a review would be limited to the record, which would reduce litigation time and costs. However, another commenter suggested that NOAA not limit the review to the administrative record, since there is sufficient law to guide the courts as to whether the review should be limited to the record.

Discussion and Initial Proposal

OPA requires public notice, opportunity for a hearing and consideration of all public comments prior to implementation of the restoration plan. NOAA, however, will not limit public involvement to the restoration plan alone. NOAA is of the opinion that because the natural resource damage assessment process will be enhanced by public comment, NOAA will seek public review of the natural resource damage assessment component in addition to the restoration plan. The regulations, therefore, may require that the trustees provide the public with an opportunity to review and comment on pre-spill plans discussed in earlier sections of this Notice as well as to comment on the natural resource damage assessment and restoration plans. Additional public involvement, i.e., oversight committees, open trustee meetings, public representation on trustee committees, etc., will be at the option of the trustee. In addition, to allow adequate public participation and to provide a basis for judicial review, NOAA may recommend the use of the open administrative record for appropriate assessments.

Open Record for Assessment

Section 1006(c) of OPA provides that trustees shall "develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent, of the natural resources under their trusteeship." 33 U.S.C. 2706(c)(1)(C), (c)(2)(B), (c)(3)(B) and (c)(4)(B). Section 1006(c)(5), 33 U.S.C. 2706(c)(5), provides that "plans shall be developed and implemented under this section only after adequate public notice, opportunity for a hearing and consideration of all public comment." Thus, Congress intended that restoration plans be developed by trustees pursuant to an administrative process that provides for adequate opportunity for public participation in the selection of restoration measures. Although Congress required public participation (through the comment process) only with respect to restoration plans, experience indicates that damage assessments should not be severed completely from restoration planning. The restoration plan represents the culmination of the assessment process, which consists of trustees selecting injury determination procedures and the identifying of restoration or acquisition methodologies. Therefore, NOAA may propose meeting these statutory mandates by requiring that trustees create an administrative record to document development of the Assessment/Restoration plan.

Adequate notice is an important component of effective public participation. Accordingly, NOAA may require that notice of the availability of the administrative record be published in the **Federal Register**, as well as a local newspaper of general circulation for appropriate spills. However, natural resource damages in the case of small spills and/or spills with a limited effect upon natural resources may be most appropriately determined through the use of a Compensation Table or another expedited process (See later section on Range of Assessment Procedures). NOAA may recommend notice only be provided in the local area in such cases. Identified RPs should also receive notice of the creation of the administrative record and of any opportunities for public participation in the development of the Assessment/Restoration Plan. In addition, publication of the availability of the administrative record in the **Federal Register** should provide the public and any additional RPs with sufficient notice of the opportunity for participation in the assessment/restoration process.

The administrative record has three basic purposes. First, it facilitates selection of restoration measures by providing a central repository for scientific data and by documenting the trustees' consideration of the relevant factors in selecting restoration measures. Second, it facilitates public participation by providing a public repository for information and by documenting compliance with public participation requirements. Third, it provides the basis for judicial review.

The administrative record, based upon current Federal practice, should contain all documents considered or relied upon by the trustees in selecting assessment and restoration measures whether or not they support the trustees' decision. The record should provide an essentially contemporaneous explanation of the basis for selection of the assessment and restoration measures. To the extent practicable, the record should be compiled as documents are generated or received by the trustees.

The specific documents contained in the administrative record will vary by spill. Ordinarily, the record should include documents such as response-generated documents concerning the nature of the spill; damage assessment documents such as preassessment determination, Damage Assessment/Restoration Plan, public comments, response to public comments, transcripts of public hearings, if any, all relevant investigation reports, scientific studies, work plans, quality assurance/quality control plans, quality assured scientific data, health studies, engineering evaluations, decision documents; and an index to the documents in the administrative record

The administrative record should include only documents reflecting information and decisions specifically relied upon in selecting restoration measures. For example, draft documents are generally not part of the record because they are superseded by a final document and therefore are not documents on which the trustee relies. Nevertheless, draft documents will be included in the administrative record if there is no final document at the time of selection of assessment/restoration measures and the draft is in fact relied upon in selecting assessment/restoration measures. Pre-decisional, deliberative internal agency memoranda will ordinarily not be included in the administrative record. Like draft documents, however, portions of these documents may be included if they contain information relied upon in selecting assessment/restoration measures and that information is not included in other documents. Documents relating exclusively to liability will ordinarily not be included in the administrative record unless they are relied upon in selecting restoration measures. Scientific data that fails quality assurance/quality control requirements should not be included in the administrative record except in the unusual case where it is specifically relied upon in some manner in selecting restoration measures.

In certain limited circumstances, the administrative record may require supplementation after selection of the Assessment/Restoration Plan. The administrative record is the body of documents that is considered or relied upon by an administrative agency in reaching a decision. Of course, documents received after the decision has been made cannot have been considered or relied upon in reaching the decision. Therefore, post-decisional documents are not properly part of the administrative record. The administrative record may require supplementation after selection of the

Assessment/Restoration Plan. For example, the trustee may modify certain components of the Plan after it has been announced, in which case the documents considered or relied upon by the trustees in modifying the Plan should then be added to the administrative record. Alternatively, the Assessment/Restoration Plan may provide that certain components of restoration will be decided upon at a later date, *e.g.*, because of the need for more information to be obtained during implementation of the Plan. Documents considered or relied upon in selecting these further restoration measures should be added to the administrative record. Also, trustees may consider information submitted by interested parties after selection of the Assessment/Restoration Plan. Trustees may consider information submitted by RPs and/or interested parties outside the public comment period if the interested party did not receive actual or constructive notice of the proposed Assessment/Restoration Plan and the opportunity to comment on the Plan; the information submitted does not duplicate information already contained in the administrative record; and the information raises sufficiently significant issues regarding the scope, effectiveness or cost of the Plan as to warrant having the trustees reconsider their decision. The trustees have the discretion, of course, to reopen or reconsider the Plan at any time. However, the public will have the right to review and comment upon modifications that are, in the opinion of the trustee, significant. One of the most important aspects resulting from the use of the open record would be the level of judicial review to be accorded the Assessment/Restoration process. The use of an administrative record may provide for judicial review only upon the record, giving great deference to the trustee agency. For a detailed explanation of how a judicial review of the Assessment/Restoration record might be justified, see Appendix III.

Role of the Responsible Party

Current Procedures Under 43 CFR Part 11

The existing procedures allow significant involvement of the Potentially Responsible Party (PRP) in the assessment process. Following a release of a hazardous substance or a discharge of oil, the PRPs are identified (if possible) in the preassessment screen. If the trustees decide to conduct an assessment, reasonable efforts are made to locate the PRP and send the PRP a Notice of Intent to Perform An Assessment. This notice describes the nature of the spill and the resources potentially at risk. The trustees are to invite the PRP to participate in the development and scope of the assessment. The trustee is then to allow thirty calendar days, with reasonable extensions, for the PRP to respond before proceeding with the development of the Assessment Plan or any other assessment actions. Following trustee approval of the Assessment Plan, the public (including the PRP) has at least an additional thirty calendar days to review and comment upon the plan. Any significant modifications of the plan require additional public (including PRP) review.

Summary of Comments

Commenters indicated a wide range of views on this issue, from unlimited RP involvement to no RP involvement, except to pay the required damages. Other commenters addressed specific phases of an assessment. Many commenters indicated that the thirty-day waiting period after Notice of Intent To Perform An Assessment is not practicable for oil spills since the RP should assume there will be some level of "assessment." Some commenters reflected that it may be a fallacy to assume that every spill results in injury or recoverable damages.

Many commenters encouraged the early and continued involvement of responsible parties because they would be more likely to cooperate if involved from the start of an assessment. In addition, early cooperation between the responsible party and trustees makes a negotiated settlement easier to achieve. It was also argued that a responsible party is the key party in the assessment process and should therefore have procedural rights of due process including participation and access to information that should not be accorded to the public at large.

Other commenters stressed that cooperation must work both ways. The trustee should also be willing to cooperate with the responsible party. Many responsible parties have the financial and personnel resources to conduct an assessment, and should be permitted to do so, even though the ultimate responsibility for the assessment rests with the trustees. The commenters noted that it can be more expeditious for the RP to fund the work, with oversight or "audit" by the trustees. The RP has a vital interest in the costs/benefits of the assessment. Some suggested that public perception of the responsible party conducting the assessment might be helped by agreeing ahead of time upon a list of "pre-approved" consultants to assist in "peer review" and/or to carry out the actual studies. The use of assessment "oversight" groups consisting of RPs, scientists, environmental groups and the public was also suggested. Restoration activities, including monitoring, may also be conducted by the RP, provided appropriate performance standards were ensured.

Others submitting comments indicated a different view by suggesting that preferential treatment for the RP is not acceptable. In addition, while full and active participation of the RP is fair and rational in theory, in practice the RP should be limited to transferring funds to trustees to conduct damage assessments and reviewing and commenting on assessment plans and other publicly-available assessment documents. It was argued that the regulations should not provide too many incentives for RP participation nor allow the RP to hire a contractor to conduct the assessment, as it would likely appear to be the fox guarding the hen house. Commenters also claimed that it would be inappropriate for the RP to develop a plan, even if the plan was approved by the trustee. Still other commenters suggested that all assessment decisions should be left entirely with the trustees. The RP should be an active participant in the assessment process, but should be subordinate to the trustees.

During the workshops, NOAA presented the concept of a "phased joint-assessment," allowing the trustees and RPs to jointly conduct certain phases of an assessment. Commenters indicated that, for joint work, industry would need some assurance that the damages amount determined by the process is reasonable and supportable. Some comments received during the workshops indicated that the joint assessment process may work well for data collection and analysis determining the extent of injury to the natural resources. However, some thought this cooperation would be unacceptable in the economic valuation portion of the assessment process where the actual amount of damages is determined based upon that injury and because of the controversial nature of such damages.

Discussion and Initial Proposal

While liability and responsibility of the RP for removal and/or response activities are addressed clearly in OPA, little guidance is given in either the statutory language or the legislative history concerning the role of the RP in the assessment process.

The degree of involvement of the RP in the assessment process will likely have a direct bearing on several aspects of the assessment. For instance, active and early involvement of a cooperative responsible party may eliminate some of the problems trustees have encountered immediately following an oil spill, such as the lack of funding, personnel and equipment. In addition, a joint trustee/responsible party assessment may be more cost effective and avoid duplicate studies by the trustees and RPs. However, it is the trustees that have been entrusted with the responsibility for conducting assessments and while NOAA is considering proposing that trustees will be encouraged to involve the RPs, the timing and degree of their involvement will likely be at the discretion of the trustees. Trustees can ill afford to delay assessment activities while attempting to entice RP involvement. In addition, trustees are ultimately responsible for conducting natural resource damage assessments and there may be circumstances where it will be deemed inappropriate by the trustee to allow any RP involvement.

Pre-spill Activities

Just as coordination among the trustees and response agencies will assist in preparing for an effective damage assessment, so can potentially responsible parties be of assistance in identifying areas with a high potential for spills and establishing pre-spill contacts. Of course, it is impossible to identify RPs prior to a spill, but trustees will be encouraged to establish contacts with oil companies, transportation and shipping interests in the local areas where spills are most likely to occur. Trustees may be able to recommend to private response entities, such as the Marine Spill Response Corporation, coastal areas of particular concern from a natural resource aspect and assist in the development of plans for the protection of those areas in the event of a spill.

While the actual degree of involvement of the RP will be at the discretion of the trustee, NOAA may recommend that the RP be invited into the assessment process when practicable. To encourage cooperation between the trustees and the RP, NOAA is considering proposing a phased, joint assessment administrative procedure for conducting assessments.

Jointly-Conducted, Phased Assessments

The assessment process may be divided into distinct steps or phases and the responsible party may be invited to participate in the various steps. Prior to the beginning of each step or phase, the RP and trustees could enter into an enforceable agreement to conduct that particular step or phase. The responsibilities, including financial contributions, of each party will be identified in the agreement and there will be provisions for nonperformance. The agreement should identify who should collect the data and under what guidelines. In addition, the parties should agree who will analyze the data, and what criteria will be used in the analysis.

While it may be most expedient for the trustees and responsible parties to use internal personnel for data collection and analysis, should they not be able to agree upon the use of joint internal personnel, the data gathering and/or preliminary analysis of the data may be contracted out to an agreed upon third party.

A phased approach to conducting joint assessments is being considered due to the possible reluctance of RPs and trustees to agree to work together before the actual assessment process begins. The phased approach may allow a working relationship to develop between the RPs and trustees yet allow maximum freedom to both parties should the joint process be determined to be unworkable.

Management Structure

NOAA does not intend to require a specific management structure in order to conduct either a trustee or joint trustee-responsible party assessment. However, NOAA may recommend that trustees plan to establish committees or teams to manage the assessments. The core members of these committees may already be selected in the pre-spill plans. As discussed earlier, the committees should have a lead administrative trustee and include representatives from all affected trustee agencies and provide opportunities, ad hoc, for involvement from response agencies and other interests, as deemed necessary by the trustees.

Preassessment Phase

This step requires the gathering of basic data concerning the type of oil spilled, extent of the spill, initial effect of the spill upon natural resources and the potential for further injury to natural resources. Based upon this information, the trustees will determine whether to proceed with assessment procedures, and which procedures will be used. While there is no specific time limit for this preassessment phase, the earlier the trustees are able to gather that information, the more effective the phase will be. Since time is of the essence in this crucial phase, NOAA may recommend that it is the option of the trustee whether to invite the RP to participate or enter into an agreement to gather the preassessment phase information. In making this determination, trustees should consider, but not be limited to, the following factors: whether a RP has been identified; the degree and extent of the spill; the willingness of the responsible party to participate; and the ability of the trustees to conduct the preassessment phase in a timely and effective manner.

The completion of the preassessment phase includes the trustees notifying the RP, in writing, if the responsible party has been identified, of the trustees' decision of whether to proceed with further assessment procedures. If they have not done so already, the trustees may invite the RP to enter into an agreement with the trustees to proceed with the assessment. Further assessment procedures could include use of the Compensation Table, Type A model (pending revision), Expedited Damage Assessment Procedures, or the Comprehensive Damage Assessment Procedures.

NOAA will not propose whether the joint-agreement concept should be considered in connection with either the Compensation Formula or the Type A procedure until those procedures and the assumptions within those procedures are proposed and made available for public review.

Assessment Activities

The agreement to conduct portions of the assessment phase should be as specific as possible, with trustee and RP activities identified. NOAA may propose the following steps or phases be considered for joint agreements for Expedited and Comprehensive Damage Assessments: Injury determination data collection; analysis of injury determination data to quantify loss of resources' services; determination of restoration costs; and determination of use and nonuse (i.e., direct and indirect use) values. Whenever possible, NOAA will encourage the combining of data collection and analysis into one agreement, resulting in a more efficient assessment process.

Restoration Activities

The involvement of the appropriate RP in the Restoration Phase should be encouraged whenever possible. Since restoration activities should be identified before determining their costs, the development of a restoration plan is actually initiated in the assessment phase. Some responsible parties may

want to actively assist in developing and implementing a restoration plan. Others may prefer to pay the damages and leave the restoration activities to the trustees. The degree of participation of the responsible party in the restoration phase is discretionary with the trustees, but the knowledge and expertise of many RPs in restoration methods could be invaluable to the trustees. Again, agreements should include specific responsibilities of the trustees and RPs. Such agreements could cover the following steps within the overall Restoration Plan: Determination of restoration activities and implementation of restoration activities. The jointly-collected data and analysis will be a part of the Administrative Record discussed in the Coordination with the Public section.

Other Party Involvement

NOAA is considering proposing that the trustees may provide for "outside" review of the assessment/restoration plan. Recommendations from other interested parties and the scientific community will be sought for appropriate reviewers and the reviewers' comments will be a part of the administrative record.

Also, the joint-management team will keep the public informed of the progress of the assessment process and will allow public review and comment of the on-going assessment and restoration plans. In addition, at the trustees' discretion, representatives of local interested groups may be invited to attend assessment management meetings to monitor the decision-making process.

Preassessment Phase

Current Status Under 43 CFR Part 11

The rule requires the trustee to complete a preassessment screen and make a determination as to whether an assessment shall be conducted. The preassessment screen is designed to be mainly a "desktop" review with minimal information gathered concerning characteristics of the spilled substance and which resources have or will likely be injured. The regulations provide criteria for use by the trustees in determining that there is a reasonable probability of making a successful claim before monies and efforts are expended in carrying out an assessment.

Summary of Comments

Some of the commenters spoke to the issue of a "preassessment screen." Generally, these commenters supported a preliminary decision-making step in a damage assessment. One of the commenters noted that a preliminary assessment could be used to establish a probable range of damages and would facilitate settlement negotiations, and which focus future assessment studies if settlement is not reached. Another commenter noted that a preassessment decision would be a good tool to use, should be flexible enough to guide the assessment, should clearly identify funds available for the assessment and could serve as a model of what needs to be done. Finally, another commenter stated that a preliminary hypothesis would be good if used to develop appropriate sampling plans and experimental design, but requiring trustees to meet certain criteria before an assessment is begun is unduly restrictive.

Discussion and Initial Proposal

NOAA is likely to propose that assessments begin with a "Preassessment Phase." The purpose of the preassessment phase is to determine if the discharge of oil warrants continuing a natural resource damage assessment. During this critical phase the trustees identify natural resources at risk from the oil and estimate the costs of the assessment and restoration activities. The trustees will be encouraged to involve the RP in the preassessment phase.

During the preassessment phase, trustees may also tentatively identify their overall plan for conducting the assessment/restoration process. This phase should supply the trustee with enough information regarding the effects of the spill so that the trustee may estimate what assessment and restoration actions will be contemplated and ensure that all such activities will be accomplished in a reasonable and cost-effective manner.

A natural resource damage assessment process generally begins with notification by the lead response agency to a natural resource trustee when a potential natural resource injury may exist, as set forth in the NCP, or when a natural resource trustee is aware of a discharge of oil. In instances where a natural resource trustee is the first to identify a possible injury to a resource under OPA and suspects an OPA-covered discharge as the source, the trustee is directed to the procedures in the NCP for reporting the discharge. Preassessment activities shall be coordinated with the lead response agency consistent with the NCP; and area response contingency plans, regional/local protocols and pre-spill plans developed pursuant to OPA.

Factors to be considered in the preassessment phase include identifying the source and possible distribution of the oil; natural resources at risk; immediate information needs and which assessment actions, if any, should follow the preassessment phase. Part of this review also involves the trustee's determination of whether the discharge is covered by any exclusions to liability contained in OPA or other Federal or State law. Specific information that NOAA may require to be collected during the preassessment phase concerning the spill site and discharge include: (1) The time, type, quantity, duration and frequency of the discharge; (2) response activities occurring at or near the site; and (3) responsible parties.

NOAA may recommend the trustees make a preliminary identification of pathways considering the circumstances of the discharge, the characteristics of the terrain or body of water involved, weather conditions and the known physical, chemical and toxicological properties of the oil. Trustees should also make a preliminary estimate based on information readily available from scientists and natural resource managers of the ecological functions, productivity or economic services of the resources identified as potentially affected. This estimate will be used in determining which resources to study if further assessment efforts are justified.

Based on information gathered during the preassessment phase and on information gathered pursuant to the NCP, NOAA may require that trustees make a preliminary determination that all of the five following criteria are met before proceeding with an assessment: (1) A discharge of oil has occurred; (2) natural resources for which the trustee may assert trusteeship have been or are likely to have been injured by the discharge of oil; (3) the quantity and concentration of the discharged oil is sufficient to potentially cause injury to those natural resources; (4) data sufficient to pursue an assessment are readily available or likely to be obtained at reasonable cost and (5) response actions carried out or planned do not or will not sufficiently remedy the injury to natural resources or the public has not been adequately compensated for a significant loss of natural resource services.

If the trustee determines that the preassessment phase results in a determination that further assessment procedures are appropriate, the next phase is to continue the assessment. If the preassessment phase results in a determination that further assessment actions are not necessary, no further assessment actions are to be taken.

NOAA may recommend that the following categories of reasonable and necessary assessment (not response) costs may be incurred in the preassessment phase of the damage assessment: Discharge detection and identification costs; trustee coordination and notification costs; potentially injured resource identification costs; baseline determination, early sampling and data collection costs; early resource protection and restoration costs; early restoration planning, if appropriate; document preparation, and administrative costs; and any reasonable additional costs deemed necessary by the trustee to carry out the preassessment phase of the damage assessment. Such costs may include indirect costs, but shall not reflect regular activities performed by the trustee in management of the natural resource. Costs shall be supported by appropriate records and documentation. Such activities undertaken as part of the preassessment phase shall be taken in a reasonably cost-effective manner and are recoverable regardless of whether further assessment activities are conducted.

Early Resource Protection and Restoration

Current Status Under 43 CFR Part 11

Emergency "restorations" are for those limited situations where immediate action is required to avoid or reduce danger to natural resources, and where response actions are determined by the trustee to be insufficient. Emergency "restorations" are an exception to the requirement for review and comment, so the trustee must be able to demonstrate that the action was appropriate and that the costs were reasonable. If possible, the potentially responsible party and FOSC should be contacted prior to proceeding with emergency restorations.

Summary of Comments

Some commenters suggested that, in the event of a spill, there is a need to restore the resources and the public's confidence in the condition of the resources as quickly as possible. A restoration hierarchy may be required, preferring as close as possible "in kind" and "on site" restoration. The response agency could plan actions with trustee agencies to ensure that the best response actions for the particular spill and that recognition should be given to the difference between "cleanup" and "abatement". One commenter pointed out that the circumstances of each incident dictate how much response can do towards protection of the resources. Another commenter indicated that planning could be done relatively easily for the many rivers and streams that have already been "classified" under the Clean Water Act and may be useful in identifying "sensitive" areas. Another commenter also stressed the individuality of each event as dictating necessary emergency actions to protect natural resources.

Local area plans will be a vital component in initiating emergency actions so trustees, subject to budget constraints, should participate extensively in developing those plans. Another commenter suggested that involving the public in early spill decisions may not work since committees cannot make rapid decisions for emergency actions at the time of a spill.

Commenters indicated that some mechanism must be developed to provide fair and reasonable funding for restoration prior to the completion of the damage assessment process. Perhaps a phased damage assessment could be instituted, where injury to individual resources are identified as information is collected over time. A sliding scale, based on volume of oil spilled, habitats affected and other factors, could be used to provide up-front funding for both damage assessment and restoration as the process proceeds. Alternatively, actions approved and undertaken by the trustees under damage assessment and early restoration could be made reimbursable by billing the RP, just as cleanup costs approved by the FOSC are reimbursed under response.

It was suggested that industry may be willing to participate in the pre-spill planning for sampling and early restoration activities; such participation may entice a RP to provide up-front funding for early sampling and restoration activities. Industry routinely collects baseline data and may not be opposed to funding sampling or to split samples.

Discussion and Initial Proposal

OPA provides authority for emergency activities to prevent or minimize injury and to hasten recovery which may involve emergency protective actions. The proposed rule may provide guidance for determining whether an emergency exists, require that the emergency be reported to the FOSC and allow for emergency actions to be taken in the event the response agency or responsible party is not taking sufficient action.

Emergency activities are for those limited situations where immediate action is required to avoid or reduce danger to natural resources and where response actions are determined by the trustee to be insufficient. If possible under the circumstances, RPs should be contacted prior to the trustee's proceeding with emergency actions. This contact will give the RP the opportunity to offer financial or personnel resources to help with those actions. Contact can be made through the FOSC.

Any natural resource trustee may take emergency action to protect or abate injury to the habitat of any species that has been identified in a Federal or State list indicating special concern with regard to that species, e.g., those that are threatened or endangered. Emergency actions can only be taken by the trustees in order to prevent or reduce the imminent loss, or threat of imminent loss, of that resource. The trustee will determine whether these actions are necessary prior to the development of an assessment/restoration plan. Such actions and associated reasonable costs must be documented by the trustee. All costs, both direct and indirect, associated with emergency actions are part of the trustees' claim for damages.

Baseline Determination, Early Sampling and Data Collection

Current Status Under 43 CFR Part 11

The current rule states that trustees, prior to the development of an assessment plan, may take the minimum samples necessary to prevent loss of data on conditions that are ephemeral, e.g., injured or dead biological resources that are perishable. Sampling at this stage is not intended to represent average conditions; the rule does not require potentially costly random sampling techniques or sampling of control areas during the preassessment screen.

Summary of Comments

It was suggested that the damage assessment process allow for immediate collection of baseline data when a spill occurs, including biological and water samples and overflights to survey fish and/or protected species. Costs expended by the trustees for baseline data collection should be reimbursed even if no immediate damage is established. Base line data may be necessary to determine injury and accordingly, damages, which may not manifest themselves until more time elapses from the spill. Funding for baseline studies should be immediately available. To avoid missing the opportunity to collect baseline data, funding should not be subjected to lengthy approval process.

One writer pointed out that response agencies often have insufficient budgets to extensively sample during the initial phase of a spill, resulting in inadequate documentation of chemical conditions. Even where a response agency's budget will permit documentation of pre-spill impacts, the agency may not have the time or expertise to conduct proper sampling. Under these circumstances, the response agency must have consultants—a time consuming process—further jeopardizing collection of immediate documentation. Therefore, NOAA should develop regional protocols, in cooperation with state agencies and on a reimbursable basis to support pre-spill surveillance and monitoring schemes to provide adequate baseline information to evaluate natural resource impacts, and develop a cooperative Regional State-Federal Assessment Response and Planning Team.

Concern was expressed that adequate funding should be available to conduct early sampling and data collection so as not to be the limiting factor in conducting a sufficient sampling effort. One commenter pointed out that an important factor to remember in a spill assessment is the size of the company that is the RP. Another suggested that the RP pay for those actions approved by the trustees, and suggested that these actions and funding be pre-approved and incorporated into area contingency plans to be established under OPA. This same commenter stated that public involvement in early sampling and emergency actions can be accomplished through active contributions to pre-spill planning efforts, and advocated establishment of a citizens oversight committee to provide input into all aspects of the area contingency plan (to be established under OPA Sec. 4202).

One commenter suggested the regulations should include planning for sampling and restoration at three levels: a national plan to be described in the regulations that would consist of general guidelines for trustee coordination and sampling, the conduct of damage assessments and the use of initial data for response activities; regional plans that would be called for in the regulations to be developed subsequently and which will provide additional information on the roles of individual agencies, coordination and data acquisition; and local or specific area plans that would be developed for high risk situations. These local plans would provide for gathering and maintaining baseline information, and for early sampling of potentially affected resources immediately following a spill. These regional and local plans would include agency assignments and teams for data acquisition. Several additional participants and commenters indicated that the major planning effort be at the local level and one participant pointed out that local area contingency plans can identify environmental contacts.

Several workshop participants indicated sources of extant or baseline data—consultants, government agencies, academia, industry, waterway operators; and the existence of current data collection programs. One participant indicated that sampling protocols should identify the best indicator species, those that are sensitive to that spill. This same participant said that the sample protocols need scientific appraisals, and further suggested that certain ecosystems that are representative should be selected and that protocols be developed for those ecosystems.

One commenter recommended the inclusion of composition and activity of microbial communities which can serve as sensitive "indicators" of the degree of oil pollution of natural environments for recommended methods in damage assessment procedures. However, another commenter felt that flora and microbial communities should be given lower priority for sampling and indicated that high natural variability, difficulty of quantification and limited knowledge of oil impact influence this recommendation.

One writer pointed out the need for recognizing the importance of regional/local/specific QA/QC plans and indicated that a national plan would be helpful for outline or guidance only. Another commenter urged the use of current QA/QC protocols rather than trying to "reinvent the wheel."

One participant pointed out that because ecosystems are dynamically changing, old baseline data may no longer be accurate at the time of the event. Another commenter suggested that "baseline" data can be obtained from control (reference) areas.

Discussion and Initial Proposal

NOAA's regulations may provide a simple framework by which to encourage the gathering of baseline data both as a desktop exercise and as an immediate field sampling effort, and further encourage early sampling and data collection under appropriate circumstances. Guidance, perhaps in a separate document, will provide procedural methodologies for implementing this effort after an oil spill and provide direction for development of regional and/or local protocols. The information gathered under an early sampling and data collection effort should contribute to the trustee's decision in choosing among the various damage assessment procedures, and be an integral part of subsequent damage assessment/restoration studies.

Close coordination with response, containment and cleanup efforts is needed to identify resources that are at risk of injury and to minimize duplicating efforts. If the magnitude of the oil spill indicates that a Comprehensive Assessment (See Range of Assessment Procedures Section) may be conducted, time constraints may dictate that baseline, initial and early sampling for damage assessment be conducted before the completion of the preassessment phase.

NOAA encourages use of existing information sources, where appropriate, as a means to facilitate early sampling and data collection design. Because existing baseline information may be incomplete or outdated, sampling and data collection may be necessary to establish or to verify baseline levels and document deviations from these levels over a short period of time. NOAA expects this phase of sampling to be conducted immediately following an oil spill, prior to initiation of damage assessment/restoration studies and, possibly, simultaneously with the preassessment phase.

Careful early sampling methodology, adherence to strict QA/QC, chain-of-custody and initiation of data management procedures will be crucial to the overall success of formal studies and, further, the entire damage assessment/restoration process.

NOAA will encourage the development of regional/local protocols, consistent with the national guidance, to cover this phase of sampling, to include provision for Quality Assurance/Quality Control procedures and to recommend the early initiation of a data management program. If developed by local/regional trustees, these protocols will identify existing local/regional data bases, appropriate publications to the area of concern and draw upon local resources (fishermen, resource managers, etc.) to identify sensitive habitats, species and other sources of information. These protocols will also identify local agencies charged with assessing injury and should be developed in close coordination with other trustees and with agencies developing local area contingency plans. These protocols can identify physical and chemical parameters, and specific target organisms (biota) for consideration for sampling, identify ecosystems and habitats of especial

sensitivity, identify local agencies charged with assessing injury and provide detailed sampling methodologies.

The support document will provide generalized direction for the trustees and may indicate minimal requirements for inclusion in the development of regional/local protocols on baseline and early sampling procedures. Some of the topics being considered for inclusion in the supporting document are: factors to be considered by the trustees before initiating an early sampling and data collection effort; guidance and methodology on sampling physical and biological parameters for petroleum hydrocarbon analyses and biological measurements; identification of local key organisms and sensitive habitats; and identification of local natural resources agencies to be involved in early sampling and data collection.

The following are examples of the minimum early sampling efforts that should be conducted to prevent the loss of data from pre-spill or initial impact conditions and to collect chemical and biological data before the initiation of a damage assessment/restoration plan.

Baseline, or Benchmark, Sampling

Where possible and appropriate, samples of water, sediment and fauna and/or flora should be taken to demonstrate hydrocarbon concentrations and biochemical markers in these natural resources at uncontaminated levels. Some of the sampling should be conducted at sites for which previous data are available.

Identification of potential trophic interactions and food chain interactions particularly as they might affect predators, including man. This desktop exercise should identify the presence of various "indicator" organisms, i.e., mussels or other bivalve molluscs which, because of their ability to bioaccumulate hydrocarbons, have been extensively studied and the fate and effect of exposure to petroleum hydrocarbons in these species are well documented. Also, these same organisms often play an important role in the food chain which increases the importance of their consideration for sampling.

Early Sampling

For all sampling conducted in areas of impact, sampling of similar parameters and organisms should be conducted in adjacent areas that have not been contaminated. This reference data will be especially crucial if sampling had not or cannot be conducted in the contaminated area before impact of the oil spill. All sampling should be designed and conducted, where practicable, to allow valid statistical comparisons between impacted and non-impacted conditions to be inferred. Sampling might include:

Physical parameters. Where practicable, samples should include water, sediments and samples of the contaminant itself to document temporal changes which will affect toxicity. Sampling should be conducted to document spatial and temporal changes in hydrocarbon concentrations. Because the presence of petroleum hydrocarbons in the water column is often ephemeral, it is desirable to use a technique that can demonstrate exposure over a given period of time. This can be accomplished by transplanting mussels or other bivalve mollusks from a known hydrocarbon-free area to impacted areas, holding them in cages at appropriate depths, then sampling them and/or replacing them periodically.

Fauna, Invertebrates. For demonstration of hydrocarbon levels in tissues, live or moribund organisms should be sampled, where practicable. Of particular importance is collecting samples of native bivalve molluscan species identical to those used for the cage measurements. Organisms, both surface and burrowing, in the nearshore area and from beaches in area of impact, should be collected for hydrocarbon analyses. Data on spatial and temporal occurrence of dead organisms should be collected. In some cases, actual dead organisms should be collected and preserved or frozen. If practicable, data on biological parameters should be collected.

Fauna, Fish. (Procedures are similar to those mentioned for invertebrate fauna.) Sampling should be not only on resident fish, but also juvenile fish, if they migrate through the impacted area and adult fish if they migrate into the impact area to spawn or feed. Samples representing all life stages, as they occur, should be collected. A note of caution—fish are able to metabolize petroleum hydrocarbons, therefore, demonstrating correlations between specific levels of tissue hydrocarbons and a particular injury is difficult. Sampling here should have lower priority than sampling for invertebrate fauna. For fish that are suspected of being vulnerable to oil contamination, biological data should be collected as time allows.

Fauna, Other Vertebrates. Where practicable, boat or aircraft surveys should be conducted in the area of impact and in the path of the oil spill to determine the abundance and distribution of seabird and marine mammalian species in the area. Statistically valid survey methods should be employed to ensure the accuracy of the estimates. Terrestrial vertebrate fauna (amphibians, reptiles, birds, mammals) in the area of impact are generally dependent upon resources provided by the aquatic marine environment; consequently, they may be vulnerable to injury from exposure to petroleum hydrocarbons. If possible, biological data should be gathered from these organisms.

Carcasses should be collected and preserved, if practicable. Moribund animals (primarily birds and mammals) or otherwise obviously exposed animals may require transportation to rehabilitation centers specially created for this purpose. Animals that subsequently die should be necropsied and tissues preserved for histopathological and contaminant analyses.

Flora. Early sampling is important because of the perishable nature of most plant material. Species should include those both common and unique to the area of impact and should be sampled for both chemical (hydrocarbon) and biological parameters.

Subsequent Sampling

During the continuing active dispersal of the oil and after the major movement of oil, there should be repetitive sampling of water, sediments and contaminant. Sampling of biota and collection of dead flora/fauna should continue. Damage assessment/restoration study plans should be ready to be phased in and sampling for parameters not discussed above may be implemented. Besides specific studies there should be general, periodic monitoring continuing into the restoration phase. There should be close coordination here among all trustee agencies and their investigators for continual scrutiny for identification of impacts to natural resources that have been possibly overlooked.

Sampling Techniques/Procedures

Quality Assurance/Quality Control (QA/QC). To ensure the integrity of data and observations collected, all samples collected under this part will be subjected to QA/QC and chain-of-custody procedures as outlined in regional/local protocols and QA/QC plans. See appendix II for a sample plan.

General Field Methods

Transect lines, randomness of samples or subsamples (pooled), specific sampling methodology, hydrocarbon-free sampling containers and replicates

are to be addressed in the regional and local protocols.

NOAA seeks comment on how interested parties could be encouraged to collect baseline information to be used in future assessments. What incentives would encourage parties to conduct these types of studies in areas prone to spills?

Coordination With Economists and Economic Issues

Current Status Under 43 CFR Part 11

Although not specifically mentioned in the existing regulations, economists are intended to play an essential role in translating injuries to natural resources into a dollar figure (damages). Since economists integrate the other components of the damage assessment, close consultation between resource specialists and economists facilitates accurate damage determination.

Quantification

The current rule provides that quantification of the change in the resource be expressed in terms of the change in the level of services that the resource provides. These services include, among others, flood and erosion control, habitat and food chains, as well as such human uses as recreation. The methodology to be used in the Damage Determination phase is critical in determining which services to measure in the Quantification phase.

Damage Determination

The current rule provides that, although the primary measure of damages is the cost of restoration or replacement of the injured resources, the damage claim shall also include the diminution in value of the injured resources pending restoration or replacement. This diminution of value is based upon the reduction in the level of services the injured resources provided to another resource or to humans as a result of the discharge or release. The economic value of the services to be restored or replaced may also be used to determine restoration priorities. In those instances where the trustee determines that the resources should be allowed to recover naturally, the primary measure of damages then will be the value of the lost services pending that natural recovery.

Summary of Comments

Although several comments dealing with economic issues were received in response to the two Advance Notices, many of the comments summarized below were given during the one workshop held in November 1991 that dealt solely with economic principles and issues. Therefore, the following summary of comments is given only to promote and focus additional comments on these issues.

General Comments

Most comments were consistent with the following framework of economic principles for natural resource damage assessment under OPA: Damages under OPA are compensatory rather than punitive; the measure of damages under OPA is the cost of restoration, rehabilitation, replacement or acquisition of the equivalent resources, costs of assessment, plus the diminution in value of those resources pending restoration; the law does not allow double recovery of damages; and any economic studies conducted should be based upon sound economic theory.

Several commenters specifically suggested components that should be included in the damage figure, including social and economic damages, and "stress" and "emotional distress" resulting from a spill. Others stated that the rule should suggest methods which account for the extra harm that might result from a spill in areas that are more susceptible to serious injury due to previous polluting events. Another suggested, however, that economists need to isolate the damage due to a specific spill event from damages due to concurrent events such as droughts, floods, etc. Some commenters suggested that natural resource damages should be limited to those directly resulting from injury to natural resources and are not intended to measure the total social costs of a spill. One commenter also suggested that increased resource impacts caused by an ill-advised cleanup action (e.g., cleanup where natural recovery would have been the best course of action) should not be assessed against the responsible party. Finally, one commenter pointed out that trustees should avoid the fallacy of the statement that "some number is better than no number."

Concerning methods to calculate damages, many commenters indicated that each economic methodology has some shortcomings so the trustee should consider how and when each methodology should be used. Some stated that the trustee should rely on market or behavior-based methods to value the losses, before using other methods. Several commenters stated that, in valuing resources, willingness to accept (or sell) should be the appropriate measure, rather than willingness to pay. Quite a few commenters stated that, if a rate for discounting future damages is specified in the rule, NOAA should not adopt the 10% discount rate contained in 43 CFR Part 11 and upheld in *Ohio* v. *U.S. Department of the Interior.*

Offsetting

Some suggested that benefits from the actions of the RP should be used to offset possible damages for lost use. For instance, where dredging was necessary for navigational enhancement, dredging undertaken by the RP as part of spill clean up should be offset against the damage claim. However, another commenter suggested that one should only count those offsetting benefits that are similar to the lost uses.

Public versus Private Recoveries

On the issue of "public" versus "private" recoveries, several commenters stated that the rule should recognize that the government has no right to recover damages for purely private causes of action, such as the increased transportation costs and economic rents that might result from a spill.

Grossly Disproportionate

Several commenters addressed the issue of when restoration costs might be "grossly disproportionate" to the value of the injured resources. Several commenters suggested that there should be no numeric factor applied to the ratio of "costs" to "value," although a few of the commenters did suggest a specific numeric factor. One commenter stated that attempts to quantify grossly disproportionate are irrelevant if the term "value" includes estimates of nonuse values, claiming that restoration costs would always be smaller than the estimated nonuse value of the injured resources. Finally, another commenter pointed out that according to OPA the "grossly disproportionate" consideration applies only to the trustees' decision to acquire equivalent resources rather than restore, rehabilitate or replace the injured resources.

Reasonable Cost

OPA includes reasonable assessment costs as part of the damage figure. Assessment costs are one of the three basic statutory elements of damages. Some commenters suggested that NOAA consider defining the term "reasonable cost" differently from the definition currently found in 43 CFR Part 11, which suggests that "reasonable" assessment costs would not be greater than the expected damage figure. Others suggested that the rule should not try to define the term since the determination of "reasonable" must be made on a

case-by-case basis and would vary, for example, depending upon the type of habitat affected.

Restoration

Several of the commenters addressed the economic component of restoration. One commenter stated that the trustee should restore "services," rather than resources, since replacing services is equal to restoring resources. Others stated that a trustee may be able to replace resources by restoring the services at a lesser cost than restoring the resources, but such replacement should be with "in kind" resources.

Finally, with respect to the hierarchy of restoration related remedies, one commenter suggested that the requirement in OPA to restore, rehabilitate or replace prior to acquiring equivalent resources is based on the assumption that economists cannot or do not fully identify and value services associated with a specific resource.

Resource Values

Many of the commenters dealt with the issue of valuing lost services. Some of these commenters noted that the important focus in a damage assessment is on the reduction in the flow of services caused by a spill. Other commenters suggested that there may be services for which economic values cannot be calculated. A few commenters specifically raised the issue of trying to put a value on indirect services provided by certain resources, e.g., cultural or religious values.

On the issue of what kinds of values one might include in a damage assessment under OPA, several of the commenters pointed out that OPA, its legislative history and the decision in *Ohio* v. *Department of the Interior*, 880 F.2d 432 (DC Cir. 1989), mandate the recovery of both lost use and nonuse values. There are many categorizations possible for lost services. "Nonuse" values generally refer to values which cannot be inferred from a person's behavior, e.g., the value of knowing that pristine areas continue to exist. Some commenters requested that the rule provide guidance in identifying the different components of resource value in a damage assessment.

Many other commenters suggested that "nonuse" values do not exist for many resources and that, furthermore, where injury is only temporary and resources can be restored, their value would not be diminished. Recovery for nonuse values would be punitive, in these cases, rather than compensatory. One of these commenters also argued that the *Ohio* decision could be applicable to OPA assessments. As such, damages could only include all "reliably calculated" values. Since methods to measure nonuse values are considered unreliable by some, this commenter claimed that nonuse values would not be allowable under the *Ohio* decision.

Measurement Methodologies

Some commenters stated that the rule should enumerate which methods can reliably estimate value. Other commenters, however, suggested that the rule should avoid specifying methodologies, and instead allow the trustees to use standard and acceptable economic valuation methodologies, such as travel cost, etc. By allowing the trustees' discretion to invoke standard, acceptable methodologies, the regulations should avoid limiting the use of new methodologies as they become available. Finally, one commenter stated that the rule should not prohibit any specific method.

Travel Cost Methodology

Some commenters stated that the travel cost models reflect people's actions rather than what people say, and are therefore preferable to non-market methods. Several comments were made about how travel cost models should be implemented. Some of these suggested that the rule should give guidance on when to use single-site models and when to use (and how many) multiple sites. Multiple site models may result in better estimates by accounting for substitute sites. These models, however, are more costly and time-consuming to implement. Some commenters pointed out that when using simultaneous equation models with multiple sites, the models must take into account congestion effects and differential quality of substitutes. Finally, some commenters raised the question of how economists should value the opportunity cost for time of the visitor.

Unit Day

One question raised by several of the commenters is whether it is cost-effective to conduct economic valuation studies for "small" spills. Some of the commenters suggested the use of "unit values," average per day values for resource uses, as a possible assessment tool for a small spill or small impacts. Some commenters cautioned that this methodology may be inappropriate where substitute sites are available or when used to quantify the reduced quality of experience.

Hedonic Property Models

Some commenters stated that the hedonic property models should be used in natural resource damage assessments. These models can be used to measure the effect of a spill on property values, i.e., measuring the reduction in value of environmental amenities. For example, one commenter pointed out that an oil spill can have long-term aesthetic impacts on beach-front property. A few of these commenters noted, however, that the use of the hedonic property model may not be cost-effective for most oil spills. One commenter suggested that "average" hedonic effects of oil spills might be inferred by comparing properties which are subject to chronic low level pollution with properties not subject to such pollution.

Other commenters noted that several factors may minimize the usefulness of hedonic property models in damage assessments. Some of these commenters pointed out that hedonic property value models depend upon long-term averages of housing markets and may not be useful to measure short-term effects of a spill. Another commenter indicated that the model should include data collected both before and after the spill. Finally, other commenters stated that it is hard to separate "public" from "private" values when using a hedonic property model.

Contingent Valuation Methodology

The use of Contingent Valuation Methodology (CVM) in natural resource damage assessments precipitated numerous comments. Although CVM is an established economic methodology, its use in measuring "nonuse" values is controversial. CVM is a valuation method which uses surveys to ask people about their values for certain goods or amenities, e.g., how much would they be willing to pay to restore an injured resource. Many of the commenters noted that CVM is a tool that should be available to trustees to measure nonuse values since there is currently no other method that can measure these values. Some of these commenters stated that the rule should place no constraints on the use of CVM. Other commenters suggested that certain factors should be considered in designing a CVM survey, e.g., geographic area covered and the possible effects of the public's outrage over the spill.

Many other commenters expressed reluctance in allowing the use of CVM to measure nonuse values. Since a rebuttable presumption is granted to the

trustees for using the damage assessment procedures prescribed by the regulations, these commenters opposed the use of "unreliable methodologies." Other commenters suggested that limitations on the use of CVM should be imposed. They proposed that CVM, for example, should be used only where there is irreversible injury or unique resources involved. Some commenters suggested that the rule should describe the kinds of scenarios where CVM may be used and should provide guidance on how to apply CVM. For example, the rule should specify preference or guidance for: Mail, phone or in-person surveys; open-ended versus close-ended valuation questions; measuring willingness to pay versus willingness to accept; surveys about preventing all spills; broad environmental issues or specific events; testing with real world experiments; animosity towards spiller; what type of CVM survey; and how to test reliability of results. Finally, another commenter suggested that the trustees conduct a survey and other studies in sensitive areas before spills rather than after spills, to avoid "outrage" being a factor in the values, and compare the results to an "after" study to measure the values.

Many commenters noted that there is still much study needed on the use of CVM to measure nonuse values. One commenter suggested that NOAA should commission the National Academy of Sciences to evaluate the use of CVM in a damage assessment context. However, another commenter pointed out that there are no existing published papers measuring nonuse values from oil spills for the Academy to review.

Discussion and Initial Proposal

NOAA has not yet determined its initial position on the various economic issues raised in this section. Therefore, NOAA is seeking further comment concerning all the economic issues to be addressed in the rulemaking, particularly those concerning methodologies for selecting restoration projects, estimating the diminution in value of resources affected by a spill and determining how to avoid double counting. In addition, NOAA seeks comment on the use of contingent valuation methodology and/or alternative methodologies in natural resource damage assessments.

Range of Assessment Procedures

Current Status Under 43 CFR Part 11—The Type A Model

A computer model for estimating damages due to small spills of oil or hazardous substances is available for the Coastal and Marine Environments. The current model estimates injury based upon user input on certain parameters of the spill and bases damages upon average use values. The model is currently being revised to comply with *Colorado* v. *Department of the Interior* and *Ohio* v. *Department of the Interior* to incorporate restoration costs and nonuse values, as well as to update use values. It is expected that the Department of the Interior will propose a model for the Great Lakes in the near future. This model will estimate damages based upon restoration costs and average use and nonuse values.

The Type B Procedures

These procedures contain a step-by-step process for determining the degree of injury to natural resources as a result of the discharge of oil or release of a hazardous substance. They also detail how to quantify that injury, establish restoration costs and develop a compensable value for that injury. The Type B Procedures are also being revised in accordance with *Ohio* v. *Department of the Interior* and *Colorado* v. *Department of the Interior.*

Summary of Comments

Many commenters indicated a preference for providing a variety of assessment procedures, including simplified procedures as well as comprehensive procedures depending on the circumstances. Simplified procedures are most applicable for small spills that would otherwise not be addressed because the cost of conducting an assessment might be greater than the ultimate recovery. Commenters noted that the use of simplified procedures would be less costly to the trustees as well as the responsible party, and will result in more timely recoveries. The benefit of the rebuttable presumption should be granted for use of any of these authorized procedures.

Some commenters questioned whether any procedure less than a comprehensive damage assessment was sufficient under OPA. These commenters noted that only a comprehensive damage assessment would properly estimate use and nonuse values. Others noted that regardless of procedures chosen, OPA requires that the measure of damages must be based upon restoration costs plus use and nonuse values plus reasonable assessment costs. Other commenters represented a different view, indicating that since injuries as a result of oil spills are short-term, damages should be based upon restoration costs and lost use values alone. According to these commenters, since nonuse values cannot be accurately determined, their use in a model or compensation formula may produce recoveries far in excess of what is needed to restore the environment. Therefore, nonuse values, it was argued, should not be required by OPA.

With respect to freshwater/riverine spills, some commenters noted the need for simplified and cost-effective procedures. Regarding urban resources, some commenters noted a need for the development of efficient methods to account for these values.

Compensation Formula or Computer Model

Several commenters indicated that a compensation table or computer model must be based upon an accurate estimate of restoration costs and that such costs must bear a reliable relationship to actual injuries to natural resources as a result of the spill. Comments regarding this premise fell into two very different categories. The first category argued that the factors taken into account by the table or model should be limited. Since the OPA is compensatory and not punitive, a model or table should not incorporate values which may be difficult to measure. Accordingly, this category of commenters would not allow the use of any option or existence values. The second category expressed concern about the use of a model or table because of the possibility that either one would underestimate the injuries. Commenters in this category, therefore, argued for the inclusion of option and existence values. According to these commenters, even if the resource recovered, there will be some diminution in value over the recovery period. Similarly, option values may remain impaired until recovery.

Several commenters agreed that a compensation formula, table or model is practical. Such a scheme could be based upon existing fish kill tables and on similar tables which should be developed for birds. Other studies, including those for existence or option values as well as those that assess values for regional wetlands, could be converted into a database and incorporated into the table or model. Some of these commenters identified factors that the table or model should take into account. These include: The scarcity of a resource in a given area; the size of the spill; and assuring that the compensation value is a significant enough deterrent so that it does not merely become a cost of doing business.

In addition, the data should be periodically updated.

A number of commenters indicated that a table could be similar to a workmen's compensation scheme which includes predetermined values for injuries but requires that those injuries be verified. Another commenter expressed a similar desire for a "reality check" between the table and the observed extent of impact.

With respect to which databases should be incorporated in a table or model, some commenters indicated a preference for databases reflecting national values rather than regional values. Conversely, other commenters stated that any model or table should be developed using regional and local data to correspond more closely to local environments and resource characteristics. One commenter indicated that the values incorporated in either the model or the table should be compared to natural resource damage awards resulting from litigation.

Concerning the use of a computer model, commenters indicated that it would more accurately evaluate variables than a simplistic formula. Models incorporating a number of key variables could be a useful assessment tool and could provide a cost-effective, reliable and rapid assessment.

Expedited Damage Assessment

NOAA proposed an expedited procedure concept in the workshops. In an Expedited Damage Assessment (EDA) the trustee would determine the amount of area affected, observe the direct mortality and then initiate restoration planning based upon those estimates. EDA, therefore, would offer some focused injury determination studies and allow the initiation of restoration more quickly than if a full assessment were undertaken. Commenters suggested that the rule should clearly elaborate the differences between the types of assessment procedures. A poorly defined range of options opens up a good possibility for disputes. A number of commenters noted that the public should be involved in EDA. Other commenters noted that EDA would be particularly useful for scenarios where there is little information regarding impacts. While not directly related to an EDA, some commenters argued for an expedited process where no restoration is required. This would enable the RPs to settle early and would avoid subjecting the RP to an inappropriate penalty.

Comprehensive Damage Assessment

Many commenters indicated that the trustees should maintain the option of conducting a comprehensive damage assessment when simplified procedures would be inadequate to restore the affected resources and services. Other commenters indicated that industry may wish to compel the trustee to undertake a full NRDA where the RP disagrees with the trustee's decision to use a simplified procedure. Under those circumstances, some commenters suggested that industry might agree to be bound by the NRDA. Notwithstanding the fact that the RP would pay for the assessment, some trustees would oppose allowing the RP to compel the trustee to conduct a full NRDA.

Some commenters recommended that the regulations provide a mechanism to calculate the amount of oil spilled. One commenter proposed that the trustee be granted the assumption that the entire cargo was spilled. The RP, therefore, would have the burden to show that a lesser amount was spilled. However, other commenters indicated that such an assumption would be unfair to the responsible party.

Discussion and Initial Proposal

NOAA is considering providing the trustees with a variety of assessment procedures, and providing guidance to the trustees in selecting the procedure most appropriate for a particular spill. The trustees would be able to choose among the various procedures based upon the circumstances of the spill or the resources involved. The availability of a compensation table or computer model for a particular spill, for example, would not necessarily rule out the use of an expedited or comprehensive damage assessment procedure where the trustee finds that the either a compensation table or computer model would not be the best method for assessing damages. Parallel assessments using more than one procedure may be allowed, provided there is no double counting.

Compensation Table

NOAA is proceeding with the development of a compensation table, to be proposed later this year. A compensation table could be used for a range of spills, including smaller spills, spills in industrialized or biologically degraded areas, spills in open water and spills where it would be difficult to ascertain precise injury. It is likely the table would be based upon a dollar per gallon formula taking into account average restoration costs plus average lost use and non-use values pending restoration. The variables will be the amount and type of oil spilled and the region and habitat type in which the spill occurs. It will provide the trustees with procedures that have both national consistency and regional specificity. It is also contemplated that the table may even be estuary- or bay-specific for areas that are likely to experience numerous spills. When the compensation table is proposed, NOAA will provide all supporting documentation concerning the determination of damages to permit a thorough public review and comment opportunity.

Adoption of the Revised Type A Model

The use of the revised Type A model might be appropriate for a range of spills. NOAA is working closely with the Department of the Interior in the revision of the current Coastal and Marine Model, as well as the development of the Great Lakes Model, in anticipation of the recommendation that these models be adopted for certain spills under OPA.

Expedited Damage Assessment

Experience has indicated that where the trustees and responsible parties have best cooperated in conducting a damage assessment, the assessment has been neither a "Type A" nor "Type B" approach, as these are currently constituted, but often has combined aspects of both. To take advantage of this practical experience, NOAA may propose an EDA procedure. This procedure will require more field work than the typical "Type A" assessment including minimal, short-term injury determination studies. The goal of the EDA will be to facilitate early initiation of restoration.

The injury determination studies would be based upon initial mortality and the area and/or types of habitat affected by the oil spill. Predetermined use and nonuse values, possibly from the compensation table or revised Type A model, could also be included as damages. Alternatively, use and nonuse values could be determined through minimal and relatively quick economic studies. Using this initial basis, the trustee would then identify restoration activities that could be implemented in the near future.

While it is impossible to anticipate all the scenarios which would be appropriate for EDA procedures, the regulations will identify a number of factors that could indicate the use of an EDA. These factors include, among others, the size of the spill, environmental sensitivity of the impacted ecosystem to the spill, unique species, type of oil and the time of year. Any of these factors alone or in combination with each other could be

sufficient to warrant use of expedited procedures.

Comprehensive Damage Assessment

The trustees may determine that the circumstances of the particular spill will require a more lengthy and detailed damage assessment. Such an assessment would be similar, in concept, to the Type B procedures. NOAA seeks further comment upon the applicability of the Type B procedures and how such procedures should be tailored to meet the requirements of OPA.

Injury and Pathway Determination

Current Status Under 43 CFR Part 11

To assert a natural resource damages claim, authorized officials must establish that an injury, i.e., an adverse change in the resource, occurred and must link that injury through a pathway to a discharge or release. Otherwise, further assessment actions cannot be taken and no assessment costs can be recovered. All of the natural resources specified by CERCLA have been placed into one of the following five groups: Surface water, ground water, air, geologic and biological resources. Specific definitions of injury are provided for each group which focus on the physical, chemical or biological properties of the resource that enable it to provide one or more services. To establish injury, there must be a measurable adverse change in the resource that is detectable by observation or scientific methods. The change must be to the physical or chemical quality or in the viability of the resource. The rule created new standards (based upon FDA standards, State health directives and eighteen measurable adverse changes in viability) that establish injury to biological resources. New injury definitions were also developed for geologic resources. Injury definitions for air, ground water and surface water resources are based upon state and Federal standards. Using these standards, trustees are able to determine that an injury has occurred without having to prove that the specific substance or oil was the sole cause of that injury.

In addition to the injury standards identified above, new standards for injuries may be established through the use of acceptance criteria. Under the current regulations, the acceptance criteria to be used for developing new biological resource viability standards include: (1) The biological response is often the result of exposure to oil or hazardous substances; (2) exposure to oil or hazardous substances is known to cause a given biological response in free-ranging organisms; (3) exposure to oil or hazardous substances is known to cause a given biological response in organisms in controlled experiments; and (4) the biological response measurement is practical to perform and produces scientifically valid results. New research necessary to develop new viability standards that meet the criteria would constitute costs beyond those which the trustees can claim as part of an assessment.

In addition to satisfying the injury definition, the pathway of the discharged or released substance to the resource must be demonstrated, and exposure of the resource to the substance must be confirmed.

Summary of Comments

Several commenters stated that oil spills do not result in permanent or long-lasting environmental impacts. Most of the environmental impacts are transient and are usually rapidly remedied by cleanup and natural processes. One of the commenters, therefore, suggested that any spill of 100 gallons or less should be exempted from the damage assessment process.

Other commenters noted that long-term impacts may not be evident for years after a spill and suggested more research regarding such effects on the environment. Some of the commenters suggested that the assessment should include studies on certain types of sublethal effects such as impacts on reproductive cycles, recovery of diversity and long-term health of the ecosystem itself. Until these effects are identified, each damage assessment should include compensation payment for unknown or cumulative effects. Such awards should be used for monitoring long-term research into such cumulative effects.

Several of the commenters stated that the acceptance criteria are too strict. Some of these commenters suggested that injury should be defined merely by demonstrating that resources were "at risk" as a result of the spill. The trustees, therefore, would be allowed to assume injury rather than meet some "threshold." Others suggested that trustees need only prove that injury to resources is, "more likely than not to have occurred." Other commenters, however, stated that the acceptance criteria should be sustained because they ensure that injuries claimed for are attributable to a spill.

Discussion and Initial Proposal

Certain viability standards that measure biological responses, such as eggshell thinning or death due to brain cholinesterase enzyme activity, which are codified at 43 CFR part 11 as injury standards, are specific to particular kinds of hazardous substances. These standards are inappropriate for the OPA regulations which address only oil, and, accordingly, will not be adopted. The remaining codified biological injury definitions can be linked to exposure to oil. NOAA seeks comment concerning which of the remaining definitions should be incorporated into the proposed rule.

Scientific literature has established that death, as well as certain types of sublethal effects on fish and wildlife, including mammals, can be linked to exposure to oil. For example, oil-induced injuries to fish include fin erosion, cancers, reduced fish reproduction and avoidance behavior. Reduced reproduction in bird populations has also resulted from exposure to oil. Finally, in wildlife, exposure to oil has led to overt external malformations, skeletal deformities, internal whole organ and soft tissue malformations, and histopathological lesions. NOAA seeks comment on whether any of these sublethal effects should be incorporated into the OPA regulations.

Injury definitions should also be addressed for the other resource categories considered in the current rule: Surface water, ground water, air and geologic resources. NOAA seeks comment on whether to develop different injury definitions for these resources, or to adopt or revise the current definitions.

The acceptance criteria in the current rule have been criticized as being too stringent. NOAA is seeking additional comment on the applicability of these acceptance criteria in developing additional adverse viability standards for injuries to biological resources under OPA. Under OPA, a trustee seeking compensation as a result of spills requiring more than a simplified assessment would still have to meet the causation requirement of demonstrating an adverse change in the resources, showing a pathway of contamination and confirming exposure of the resource to the oil. If these criteria are too stringent, what standards would be used to establish than an observed biological response is a measurable adverse change in the viability of that resource as a result of exposure to the discharge oil?

Restoration Guidance and Costs

Current Status Under 43 CFR Part 11

The existing procedures give guidance to trustees in developing a plan for the restoration, rehabilitation, replacement or acquisition of the equivalent of the natural resources under their trusteeship. The procedures allow for adequate public notice, opportunity for a hearing and consideration of all public comment before a final plan is developed and implemented. Trustees are to develop possible alternatives for restoration, rehabilitation, replacement, and/or acquisition of equivalent resources. For large, complex assessments involving a variety of resources and services, there may exist several restoration alternatives. The trustees may consider any combination of restoration, rehabilitation, replacement, and/or acquisition actions under these circumstances, provided that these actions return the injured natural resources and the services that they provide to the public to the levels before the spill.

Summary of Comments

There appeared to be general consensus that only guidance, not rigid requirements, should be provided in the regulations in determining damages through restoration planning and implementation of restoration activities. Concerning a possible hierarchy of restoration, comments varied depending on whether emphasis was on inland spills or coastal spills. The majority of the views expressed on the issue of coastal spills indicated that restoration of the natural resources should be the primary objective followed by replacement, and that acquisition should be considered only as a last resort. Commenters regarding inland spills suggested that the order of preference should be reversed. Some indicated that, in sites where trustees are not sure of how to restore, acquisition should not be a last resort. These commenters indicated that humans may lack the technology to restore an inland system and, furthermore, that restoration may cause more harm than good.

Concern was expressed that because there are few proven restoration techniques, remediation rather than restoration may be the only alternative. Accordingly, trustees indicated that the definition of "technically feasible" in the current rule is too stringent since it requires that restoration techniques be well known and that each element of a restoration plan have a reasonable chance of successful completion in an acceptable period of time. These trustees suggested that the rule allow the use of pilot studies where those studies have a reasonable chance of success.

Additional commenters indicated that timing of the restoration activities is important to facilitate natural biological cycles. Others noted that monitoring must be an integral part of any restoration plan to ascertain whether the restoration has been a success. Some commenters noted that it may be difficult to determine at what level services should be restored. For example, since lower population levels can result from natural variability as well as from the impact of an oil spill, trustees should account for this variability in undertaking a restoration.

Some commenters suggested that the trustees consider restoring systems rather than individual species. Other commenters indicated that trustees should consider the option of natural recovery since it may be infeasible to speed the recovery of local populations to their pre-spill densities. By letting nature perform many key functions, the cost of a restoration or rehabilitation project may meet a "reasonable cost" criterion. Some commenters suggested that natural recovery of an entire ecosystem may be a slow process and may never accomplish a full return to pre-spill species types and/or populations. Another commenter suggested, however, that recoveries for lost use pending restoration can compensate for lost services; perhaps replacing services by adding access to substitute sites.

Discussion and Initial Proposal

NOAA is considering providing the trustees with guidance on a variety of restoration techniques and on the selection of restoration alternatives most appropriate for a particular spill. However, NOAA will encourage the trustee to undertake full scale restoration projects only after pilot projects have been attempted.

The impacts of each oil spill are influenced by a number of factors, including the type and quantity of oil, site of the spill, season, temperature and wind speed and direction. At a minimum, all restoration plans must include some maintenance and monitoring. In addition, since restoration is an emerging technology, the plans must incorporate provisions allowing for mid-course corrections. NOAA will request trustees to address the following issues in their planning: What was the pre-spill condition of the site; is the site frequently exposed to spills; and what is the post-cleanup condition of the site. The answers to these and perhaps other questions (e.g., the amount of money available) should form the basis for defining the goals and objective criteria for restoration.

Cleanup and remediation actions will largely determine the type and amount of post-cleanup activities that trustees should conduct. In addition, the amount and quality of restoration that can be undertaken is largely dependent upon the limited ability of the responsible party to pay. If less than the cost for full restoration is obtained, priorities will have to be established among the natural resources that are candidates for restoration. NOAA may recommend that the approaches used be based on available funds from the settlement or award, scientific and management recommendations to the Restoration Plan and responses of the public during the public review process.

NOAA is considering the use of a range of restoration and/or replacement alternatives and seeks comment on the possible components of that hierarchy. These alternatives should include a "No Action—Natural Recovery" alternative as well as other alternatives that reflect varying rates of recovery, alternate priority resources, management actions or equivalent resource acquisition. Restoring, rehabilitating and replacing injured resources are similar activities, and may be considered simultaneously, however, NOAA may recommend that resource acquisition be selected as a last resort, when it is the only viable method of obtaining lost functions.

NOAA will recommend that all restoration plans include some monitoring and maintenance, as well as the ability to make mid-course corrections. Monitoring and maintenance should continue until there is clear evidence that the system has produced the expected succession of animal and plant assemblages and has stabilized.

While the actual degree of involvement of the RP will be at the discretion of the trustees, NOAA recommends that restoration planning activities be coordinated among the trustees and the responsible party. Decisions should be made by consensus of the trustees. The lead administrative trustee should be responsible for coordinating activities. Once preliminary agreement has been reached relative to the types of activities that are needed and feasible, notice of the preliminary plans should be made public and an opportunity provided for a public hearing for appropriate spills. Public comments should be considered during development of the final restoration plan.

From its research and experience in the area of resource and habitat restoration, NOAA can make certain recommendations in the area of restoration. The following discussion on possible restoration strategies and techniques is given as guidance, not requirements, to other trustees. These recommendations do not, by any means, cover all possible resources, incidents or services provided by resources.

Generally, residual oil or oil products that can impede development or growth, or taint the biota, should be removed from an oiled habitat and any alteration to the hydrology corrected. Sources of contamination must be eliminated for successful on-site restoration to be implemented. Where cleanup may cause additional injury, the trustees must decide if the additional injury and subsequent restoration is preferred to natural recovery. Recommended techniques may include, but are not limited to: Physical removal of contaminated sediments, whereby clean substrate is exposed for revegetation or recolonization. Clean sediment should be added so that the elevation profile and hydrography is restored if scraping is used. This technique applies to both intertidal and subtidal beaches and flats. Pressure spraying is another alternative; and enhanced bioremediation, whereby nutrients are added to enhance the microbial degradation of oil should be considered. Bioremediation has the potential to clean up the oil trapped beneath rocks and in the beach sediments.

Effects of direct mortality, as well as lowered fecundity, on population levels may be alleviated by cleaning up the oil and introducing suitable substrate to provide the opportunity for wild stocks to repopulate the site. Other techniques for restoration of fauna may include, but are not limited to: Limiting fishing or harvesting in order to allow time for species to repopulate an area; enhancing shellfish populations by covering shellfish beds with crushed oyster shells or gravel to enhance larval setting; harvesting natural resources that are in danger of being contaminated; constructing artificial reefs to attract finfish and shellfish into an area; and introducing hatchery-reared juveniles in extreme cases.

Oil in marshes can lead to changes in floral reproductive capacity, abnormalities in growth and seed formation and reduction in plant shoots. Thick layers of oil can prevent gaseous interchange between soil and air, which can lead to chlorotic symptoms and death in plants. Two alternative techniques will be recommended for restoring vegetation: Planting and natural recovery. Natural recovery is frequently recommended for mangroves. Planting is a viable option for restoring some vegetation. In all cases, hydraulic gradient must be appropriate and light attenuation conditions must be appropriate for seagrasses and other submergents. Injury to seagrass may be rectified by using seagrass plugs, bare roots or peat pots. The latter two approaches are thought to be more cost-effective and less labor intensive. Planting of 1–2 year old mangrove seedlings grown from propagules harvested in the wild is a recommended technique for restoring mangroves. Salt marsh transplanting also may be accomplished by bare root and plugs of wild stocks or greenhouse-reared plants. NOAA will recommend that the trustees consult published recommendations that are available.

NOAA may recommend that restoration plans should attempt to restore an injured site to a state that provides the greatest potential for recovery of all of its natural resources. NOAA, however, recognizes that a site cannot always be restored to a level that would be conducive to replenishing populations and services. It also recognizes that recovered damages may not be sufficient to permit adequate restoration. Under these conditions, other alternatives should be considered. Other damaged or altered sites could be rehabilitated to allow the lost populations to increase to a level that would compensate for their loss in the oil spill site. This might require the acquisition of privately-owned property. NOAA may recommend that preference be given to sites adjacent to the impacted site, sites within the same watershed, or sites that have similar resources in another watershed.

Measures that would facilitate or improve use of a site can be undertaken rather than restoring the natural resources where restoration is deemed infeasible or impossible by the trustee. These measures include upgrading a marina or adding a dock to facilitate access for recreational fishing, rather than restoring fish populations. NOAA may recommend that preference be given to sites that are closest to the impacted site. This, however, should be considered a least acceptable option since resources that have been impacted are not being replaced.

NOAA may recommend that costs of habitat restoration, as compensation for injury to trust resources or their uses, be determined from information from nationwide experience in previous, well-conducted restoration attempts, where practicable, and that they be measured by their effectiveness in restoring lost natural ecological function. Restoration is a new and emerging field. Thus, NOAA recommends that the cost estimates for restoration include a monitoring program, mid-course corrections, planning and management costs.

Coordination With Legal Counsel

Current Status Under 43 CFR Part 11

The current regulations do not require trustees to coordinate with respective agency counsel, other than to require that assessment activities must comply with other applicable laws. However, the preamble to the current rule encourages the use of an interdisciplinary team for assessments.

Summary of Comments

Some participants indicated that, since many assessments have been conducted under the threat of litigation, attorneys have more say than the scientists in the assessment process. Others indicated that early and frequent coordination is necessary in order for trustees to maximize claims that will be determined in court.

Discussion and Initial Proposal

Attorneys play a major role in the form and procedure of conducting a damage assessment. It is not likely the regulations will require that attorneys be officially involved in the assessment process. However, trustees should frequently seek their respective counsel's advice. Due to the possibility of litigation in a natural resource damage assessment, the attorneys will generally be a part of the process.

Coordination With State Law

Current Status Under 43 CFR Part 11

Under the current rule, all trustees (State, Federal and Indian tribal trustees) are urged to plan and implement damage assessments jointly. The current rule also recognizes that double recovery is prohibited by law. State law and regulations are used to establish injury threshold levels. Where Federal law allows, appropriate state procedural laws apply to assessment activities. Also, in conducting assessments, trustees are required to comply with any other applicable statutes.

Summary of Comments

Questions were raised on how natural resource trustees could conduct joint assessments and still fulfill their responsibilities. For example, state

compensation tables may not be based upon the same parameters as the OPA table.

Some commenters from potentially responsible parties indicated concern that they would have to deal with at least two sets of trustees and that state and Federal trustees might be conducting parallel, but separate, assessments. Many commenters suggested that the potential for conflicting law and regulations is an excellent reason for the trustees to plan and organize in advance of a spill.

Since the goal of the trustees should be to restore the resource, it was proposed that the trustees should conduct joint assessments and claim damages only for the amount necessary to restore. Otherwise, trustees might attempt to pursue claims under other laws that would allow recovered monies to be used for purposes other than restoration. In addition, it was suggested that the regulations require the trustees to select the statutory scheme, i.e., either State or Federal, at the time of the spill, under which to pursue a damages claim.

Discussion and Initial Proposal

OPA does not preempt state oil spill laws and related regulations, thus allowing for the potential for higher recoveries. However, OPA specifically prohibits the "double recovery" of damages as a result of injuries to natural resources, thus trustees cannot collect more than once for the same injury. Since section 1018 of OPA does not prevent states from establishing additional liability as a result of an oil spill, the OPA regulations cannot require state trustees to adopt or follow the procedures promulgated by NOAA in lieu of other state laws or damage assessment schemes. However, since OPA also prohibits the "double counting" of natural resource damages, all trustees will be encouraged to conduct joint assessments and present a total unified claim for damages. Such claims should be deemed sufficient by the trustees to restore the injured natural resources and services and for diminution in values until restoration is complete. As discussed in the "Use of Sums Recovered" section of today's Notice, any monies received under OPA must be used to restore, rehabilitate, replace or acquire the equivalent of the affected resources and services provided by those resources. NOAA will encourage trustees to concentrate upon "fixing the resources" and not be distracted by ill-fated ventures of attempting to divide the resources and pursue individual claims.

The unified trustee approach will also encourage participation from the responsible party, instead of a multi-assessment process that would encourage the responsible party to pursue litigation in order to lessen the number of claims. In addition, unified trustees will allow the pooling of resources for a more effective assessment and, if necessary, litigation.

NOAA also notes that state trustees should be encouraged to coordinate with Federal trustees, since section 7 of Executive Order 12777, 56 FR 54757 (October 22, 1991), requires that monies from the Oil Spill Liability Trust Fund for the "initiation of assessments" are provided to the Federal trustees. The Federal trustees may then allocate such monies to other trustees.

Use of Sums Recovered

Current Status Under 43 CFR Part 11

CERCLA requires that funds recovered for damages must be used to restore, replace or acquire the equivalent of the injured resource. To accomplish this objective, the current rule requires the establishment of an account into which all monies awarded pursuant to section 107 of CERCLA or section 311(f)(4) and (5) of the Clean Water Act for compensation for damages must be placed. For Federal trustees, this account shall be located in the United States Treasury. States or Indian tribe trustees are given the choice of setting up an account in their treasury or having the responsible party set up an interest-bearing fund. The purpose of these procedures is to ensure that monies obtained for restoration will be available for that use without requiring that the trustee go through the normal appropriations process.

All monies awarded to the Federal natural resource trustee go into non-interest bearing accounts in the Federal Treasury. This procedure requires an adjustment to take into consideration anticipated inflationary effects. Therefore, the rule provides that, for these Federal accounts, the damage award going into the non-interest bearing accounts shall be adjusted by the rate payable on Federal notes and bonds with a maturity that approximates the length of time required to complete the restoration. This procedure is meant to adjust for the effects of inflation when the restoration or replacement is expected to occur over a long period of time. The monies are spent in accordance with the final Restoration Plan.

Since amounts recovered for a type A assessment may be less than the amounts recovered as a result of a type B assessment, it may be infeasible to prepare a separate full-scale restoration plan for each type A assessment award. The rule provides that, when recoveries occur from type A assessments, the natural resource trustee may apply several type A recoveries to one restoration plan, so long as the plan is intended to address the same or similar resource injuries as those identified in each type A assessment.

Summary of Comments

Some commenters indicated that, whenever possible, trustees should establish a "Joint Trustee Fund." The fund would be managed by the Trustees as a group, with disbursements made in accordance with a jointly prepared Restoration Plan. However, it was also pointed out that joint accounts can only be accomplished through the Registry of the Court, do not yield a high rate of interest, and additionally, Federal judges do not like to add to the administrative load of the court.

A few commenters indicated that a joint fund system will only work if the trustees work well together and can agree to a process to manage and disburse the funds. There would have to be a dispute mechanism and a process for dissolving the partnership, if necessary. The issue of whether trustee disputes would result in the funds being tied up in the account rather than directed towards restoration activities was also raised.

One commenter raised the question of whether the responsible party should also have a role in the managing of the funds.

Discussion and Initial Proposal

NOAA may provide the trustees more than one option for the use of sums recovered from a responsible party.

Placement of Funds

NOAA may propose that trustees establish a "joint trustee account" under the registry of the applicable Federal district court. Such an account may be interest bearing, depending upon the rules of the court, and will be jointly managed by all the trustees through a trustee committee or council established by the trustees.

While the joint trustee account may be the preferred alternative, the trustees may also have the option of dividing the recoveries and depositing their respective amounts in their own separate accounts. Such funds shall be retained by the trustee in a revolving trust account, without further appropriation, for use only in the reimbursement or payment of costs of the trustees in performance of section 1006(c) of OPA. Funds under the

management of Federal trustees shall be placed in the interest bearing accounts authorized under section 1006(f) of OPA until expended for the purposes of implementing the final restoration plan. Regardless of the placement of recoveries, the trustees must maintain appropriate accounting and reporting methods to insure the proper use of sums recovered.

Use of the Sums Recovered

Upon the receipt of the monies by the court registry, the trustees may immediately petition the court for that part of the damages that represents the unreimbursed reasonable costs of assessing damages which would include the costs of initiating the development of the restoration plan. Expenditures from the joint fund will be allowed by petition to the court and all expenditures will be used to develop and implement the final restoration plan as approved by the trustees. Appropriate costs include the trustees' base and incremental costs in developing and implementing the restoration plan. In accordance with section 1006(f) of OPA, any funds in excess of the costs or reimbursements for the implementation of the restoration plan shall be transferred to the Oil Spill Liability Trust Fund.

Where the trustees have adopted an overall restoration plan for a specific area, i.e., bay or estuary, recoveries of co-trustees or recoveries from previous spills may be pooled until there is a sufficient amount of money to conduct restoration activities, including the costs of monitoring and maintenance, on an ecosystem, bay or area approach. This option for use of recoveries will likely be most useful in areas with long-term pollution effects where damages recovered from a single spill would be too small to improve the ecosystem. Where an overall restoration plan has not been adopted by the trustees, or is inappropriate for the particular spill, specific restoration plans must be developed in relation to the amount of damages recovered.

Definitions for OPA Regulations

NOAA may propose the following definitions in the regulations. Many of the definitions given here are taken, with some modification, from either OPA or 43 CFR 11.14.

"Acquisition of the equivalent" or "replacement" means the substitution for an injured resource with a similar resource that provides the same or substantially similar services.

"Air" or "air resources" means naturally occurring constituents of the atmosphere including those gases essential for human, plant and animal life.

"Assessment area" means the area or areas within which natural resources have been affected directly or indirectly by the discharge of oil.

"Baseline" means the condition or conditions of the natural resources that would have existed at the assessment area had the discharge of oil under investigation not occurred. The baseline takes into account natural variability that would have existed at the assessment area had the discharge of oil under investigation not occurred.

"Biological Resources" means those natural resources referred to in section 1001(20) of OPA as fish, wildlife and biota. Fish and wildlife include marine and freshwater aquatic and terrestrial species; game, nongame and commercial species; and species listed as endangered or threatened under Federal or State law. Biota encompasses shellfish, terrestrial and aquatic plants and other living organisms not otherwise listed in this definition.

"CERCLA" means Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 *et seq.*, frequently referred to as the "Superfund Act."

"Control area" or "control resource" means an area or resource unaffected by the discharge of oil under investigation. A control area or resource is selected for its comparability to the assessment area or resource and may be used for establishing the pre-spill condition and for comparison to injured resources. A "control" area or resource is also referred to as a "reference" area or resource.

"Cost-effective" or "cost effectiveness" means that when two or more activities provide the same or a similar level of benefits, the least costly activity providing that level of benefits will be selected.

"Damages" means the amount of money calculated to compensate for injury to, destruction of, loss of or loss of use of natural resources, including the reasonable costs of assessing or determining the damage, which shall be recoverable by a United States, State, Indian tribe or a foreign trustee.

"Destruction" means the total and irreversible loss of a natural resource.

"Discharge" means any emission of oil (other than natural seepage), intentional or unintentional and includes, but is not limited to, spilling, leaking, pumping, pouring, emptying or dumping.

"Drinking water supply" means any raw or finished water source that is or may be used by a public water system, as defined in the Safe Drinking Water Act, or as drinking water by one or more individuals.

"Exclusive economic zone" means the zone established by Presidential Proclamation Number 5030, dated March 10, 1983, including the ocean waters of the areas referred to as "eastern special areas" in Article 3(1) of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990.

"Expedited damage assessments" (EDA) means a range of techniques to assess damages to natural resources that are intermediate between the type A procedure of 43 CFR part 11 and a comprehensive damage assessment. Those procedures include injury assessment studies that would yield sufficient data to make a claim for compensation but would not be so comprehensive as to constitute long-term data collection programs. The goal of an EDA is to enable the trustees to move more quickly into restoration.

"Exposed to" or "exposure of" means that all or part of a natural resource is, or has been, in physical contact with oil or with media containing oil.

"Fund" means the Oil Spill Liability Trust Fund, established by section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

"Geologic resources" means those elements of the Earth's crust such as soils, sediments, rocks and minerals, including petroleum and natural gas that are not included in the definitions of ground and surface water resources.

"Ground water resources" means water in a saturated zone or stratum beneath the rocks or sediments through which ground water moves. It includes ground water resources that meet the definition of drinking water supplies.

"Incident" means any occurrence or series of occurrences having the same origin, involving one or more vessels, facilities or any combination thereof, resulting in the discharge or substantial threat of discharge of oil.

"Injury" means a measurable adverse change, either long or short term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil.

"Lead administrative trustee[s]" means the trustee agency that is responsible for coordinating the injury determination, quantification, damage determination and restoration strategy selection processes in the event of a discharge. The lead administrative trustee[s] shall be designated by the Federal, State, Indian tribal and foreign

trustees that have natural resources which have sustained, or are in substantial threat of sustaining, injury, destruction, loss or loss of use as a result of a discharge or the substantial threat of a discharge.

"Loss" means a measurable adverse reduction of a chemical or physical quality or viability of a natural resource.

"Natural resources" or "resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the United States (including the resources of the exclusive economic zone), and State or local government or Indian tribe or foreign government.

"Natural resource damage assessment" or "assessment" means the process of collecting, compiling and analyzing information, statistics or data through prescribed methodologies to determine damages for injuries to natural resources as set forth in this part.

"Navigable waters" means waters of the United States, including the territorial sea.

"Nonuse value or values" means the value that humans have for services provided by a resource where those humans do not have actual physical or visual contact with that resource. Such services encompass values associated with the option to use a resource in the future, and values associated with knowing that the resource exists or will be conserved in the future.

"Oil" means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredge spoil, but does not include petroleum, including crude oil or any fraction thereof, which is specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of section 101(14) of CERCLA and which is subject to the provisions of that Act. However, for any of the petroleum products that would be specifically listed or designated as a hazardous substance pursuant to the above referenced CERCLA provisions, but are a direct byproduct, component, or derivative of the oil discharge under investigation, then these petroleum products are included in the OPA definition of oil.

Inherent in this definition of oil is the recognition that oil is a complex substance with many chemical constituents. These "toxic" constituents are released during the process of weathering (which includes volatilization, decomposition and dispersion) and therefore, may be injurious to natural resources. Because these constituents are a direct result of the discharge and because they also cause injury to the natural resources that fall under the purview of OPA, constituents of oil that would otherwise be listed as a hazardous substance under CERCLA will be included within the OPA definition of oil, provided that these constituents are derived from the discharge of oil under investigation. The response agency, or the trustee, must make an initial determination at the time of the discharge as to how to classify the substance. If it falls within the hazardous substances classification of CERCLA at the time of the initial determination, then the discharge will be governed under CERCLA. However, once a discharge is classified as oil, as opposed to a hazardous substance, then the oil and its byproducts or constituents are regulated under OPA. This approach avoids the possibility of two complex statutory and regulatory schemes being applied to the same oil discharge incident.

"OPA" means Oil Pollution Act of 1990, 33 U.S.C. 2701 *et seq.*

"Pathway" means any physical, biological or chemical link that connects the natural resource injury to the discharged oil.

"Reasonable cost" means the amount that may be recovered for the cost of performing a damage assessment.

"Recovery Period" means the length of time required for the injured natural resources and the services that the natural resources provide to return to their baseline conditions.

"Reference area" or "reference resource" means an area or resource unaffected by the discharge of oil under investigation. A reference area or resource is selected for its comparability to the assessment area or resource and may be used for establishing the pre-spill condition and for comparison to injured resources. A "reference" area or resource is also referred to as a "control" area or resource.

"Replacement" or "acquisition of the equivalent" means the substitution of a similar resource that provides the same or substantially similar services as an injured resource.

"Responsible party or parties" means a person or persons described in or potentially described in one or more of the categories set forth in section 1001(32) of OPA.

"Restoration" or "rehabilitation" means actions undertaken to return injured natural resources to their baseline condition, as measured in terms of the injured resources' physical, chemical or biological properties and the services they previously provided.

"Services" or "natural resource services" means the physical, biological and aesthetic functions performed by the resource including the human uses of those functions. These services are derived from the physical, chemical or biological quality of the resource.

"Surface water resources" means the waters of the United States including the sediments suspended in water or lying on the bank, bed or shoreline and sediments in or transported through coastal and marine areas. This term does not include ground water or water or sediments in ponds, lakes or reservoirs designed for waste treatment under the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901–6987.

"Technical feasibility" or "technically feasible" means that the technology and management skills necessary to implement an Assessment Plan or Restoration Methodology Plan are well known and that each element of the plan has a reasonable chance of successful completion in an acceptable period of time.

"Trustee" means those officials of the Federal and State governments, of Indian tribes and of foreign governments designated according to section 1006(b) of OPA who may present a claim for and recover damages to natural resources.

"Type A procedure" means one of the simplified natural resource damage assessment procedures requiring minimal field observation, found in subpart D of 43 CFR part 11.

"Type B procedure" means an alternative protocol for comprehensive natural resource damage assessments, currently found in subpart E of 43 CFR part 11.

"Use value or values" means the value that humans have for services provided by a resource where those humans have actual physical or visual contact with that resource.

(33 U.S.C. 2706(e))

Dated: March 9, 1992.

Thomas A. Campbell,

General Counsel, National Oceanic and Atmospheric Administration.

Appendix I—Draft Memorandum of Understanding

I. Introduction

This Memorandum of Understanding (MOU) by and between the State of _____ (State), the National Oceanic and Atmospheric Administration of the United States Department of Commerce (NOAA), the United States Department of the Interior

(DOI) and the United States Department of Agriculture (USDA) (collectively referred to as the Trustees) is entered into to ensure the coordination and cooperation of the Trustees in the initiation of assessment and assessment of damages for injuries to natural resources resulting from _____, and the application of any natural resource damages recovered toward the restoration, rehabilitation, replacement and/or acquisition of equivalent natural resources.

[Note: Obviously, in any given incident there may be more or fewer trustees than those indicated above.]

II. Parties

The following officials, or their designees, are parties to this MOU and act on behalf of the public as Trustees for natural resources under this MOU:

1. The _____ of the State of _____,
2. The Under Secretary for Oceans and Atmosphere, Administrator of the National Oceanic and Atmospheric Administration, acting on behalf of the Secretary of Commerce,
3. The Secretary of the Department of the Interior,
4. The Secretary of the Department of Agriculture,
5. [The Secretary of DOD, DOE and/or the designated trustee of a Tribe and any foreign [international] trustee.]

III. Location

This MOU is intended to address natural resources injured [damaged] * * *

[Identify as precisely as possible geographic location and incident(s) involved]

* * * (the Incident).

IV. Purpose

The Trustees recognize the importance of integrating and coordinating the assessment of natural resource damages for injuries to natural resources affected by the Incident, seeking compensation for those injuries to natural resources and the services they provide and restoration of those affected resources and services provided by those resources. The purpose of this MOU is to provide a framework for such coordination and cooperation between the Trustees, and for the implementation of the activities of the Trustees in furtherance of their natural resource trustee responsibilities. The Trustees' activities will primarily involve assessing damages for injuries to natural resources, seeking compensation for those injuries to natural resources and the services they provide and restoring the injured natural resources and the services provided by those natural resources affected by the Incident. Nothing in this MOU is to imply that any signatory trustee is in any way abrogating or ceding any responsibility or authority inherent in its control or trusteeship over natural resources.

V. Authority

The Trustees enter into this MOU in accordance with the natural resource trustee authorities provided for each Trustee by the Federal Water Pollution Control Act, 33 U.S.C. 1251 *et seq.*, the Oil Pollution Act of 1990, Public Law 101–380, the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 U.S.C. 9601 *et seq.*, and, if utilized, the Natural Resource Damage Assessment Regulations, 43 CFR part 11, or the OPA regulations, when promulgated.

VI. Organization

The Trustees recognize the importance of coordinating their efforts in order to effectively and efficiently meet their respective natural resource trustee responsibilities under applicable Federal and State law. Accordingly, there is hereby created a Trustee Council to implement the MOU to which each Trustee will designate a representative and an alternate. The Council may create subcommittees when they are deemed necessary to effect the purposes of this MOU. A representative designated by unanimous consent of the Trustee Council members will serve as Lead Administrative Trustee for administrative purposes. This representative shall fully coordinate its activities with and act under the direction of the Council. The Trustee Council will also seek advisory participation from the United States Department of Justice, the United States Department of Transportation (Coast Guard), the State Attorney General or other legal advisor and the United States Environmental Protection Agency, when appropriate.

VII. Duties and Responsibilities

On behalf of the Trustees, the Trustee Council shall coordinate and authorize all Trustee activities and matters under this MOU in accordance with the decision making requirements contained in section VIII. The Trustee Council may take whatever actions the Council, in its discretion, determines are necessary to fulfill the trust responsibilities of each Trustee under and to effectuate the purposes of applicable Federal and State law. It is expected that the Trustee Council, in accordance with applicable laws and policies, may take the following actions, among others, to address the Trustees' natural resource trustee responsibilities:

A. Conduct scientific and technical studies, sampling and other matters related to the assessment of natural resource damages for injury to natural resources with respect to trust resources which may be lost, injured or destroyed.

B. Seek compensation from responsible parties for the damages assessed by the Trustees and for the costs of planning and implementing the assessment.

C. Acting in concert with its attorneys, participate in negotiations with responsible parties.

D. In accordance with applicable law, supervise, manage and obligate any money paid to the Trustees by or on behalf of responsible parties for the purpose of assessing, restoring, replacing, rehabilitating, and/or acquiring the equivalent of the affected natural resources.

E. Oversee the development and the implementation of a plan for the restoration, replacement, rehabilitation, and/or acquisition of equivalent resources for those trust resources, and the services provided by those resources, that may be injured, destroyed or lost.

F. In accordance with applicable law, make all necessary decisions for the management and administration of funds pursuant to section IX.

G. In accordance with applicable law, arrange for one or more contracts with professional consultants, technical or otherwise, that the Trustee Council determines are necessary and best qualified to provide services to the Council.

H. Identify a contact for coordination with the Coast Guard regarding access to the Oil Spill Liability Trust Fund.

The duties of the Lead Administrative Trustee shall include, but are not limited to: Coordination and monitoring of the progress of the natural resource damage assessment process; scheduling of meetings of the Trustee Council, and preparation of agendas for those meetings; acting as a central contact point for the Trustee Council; establishment and maintenance of records and relevant documents; and such other duties as directed by the Trustee Council. The Lead Administrative Trustee will be responsible for informing the other Trustees of all pertinent developments on a timely basis.

VIII. Decisionmaking

The Trustees agree that all decisions implementing this MOU shall require unanimous approval. In the event that unanimous agreement cannot be reached among the members of the Trustee Council, the matter in dispute will be elevated to the Trustees for resolution. If necessary, the Trustees may establish further mechanisms by which disputes may be resolved. The Trustees further agree that decision making deliberations will focus upon the Trustees' mutual purpose of assessing, restoring, rehabilitating, replacing and/or acquiring the equivalent of the affected natural resources, rather than upon control or respective trusteeship over those resources.

IX. Funds

The Trustees agree to cooperate in good faith to attempt to establish, to the extent consistent with applicable law, a joint trust account for purposes of receiving, depositing, holding, disbursing, managing and expending all natural resource damage recoveries obtained or received by the Trustees relating to the natural resource injuries arising out of the Incident and interest earned thereon. This joint trust account will be established under the registry of the applicable Federal district court. Such recovered damages shall be used for restoration activities conducted under this MOU to address those injuries to natural resources and the services that they provide. Any recoveries for injury to natural resources obtained or received by or on behalf of any Trustee shall be deposited in this joint trust account.

The Trustee Council, in accordance with its decision making process in section VIII, shall establish standards and procedures governing the joint use of all natural resource damages received by the Trustees for the purposes of restoring, replacing, rehabilitating and/or acquiring the equivalent of natural resources injured as a result of the Incident and the reduced or lost services

provided by such resources pursuant to the final Restoration Plan.

The Trustees further agree that the following damage assessment costs shall be advanced or reimbursed to each Trustee out of any damage assessment cost recoveries or payments thereon, including funds received from the Oil Spill Liability Trust Fund: reasonable unreimbursed costs jointly agreed upon for the planning, conduct, evaluation and coordination of all natural resource damage assessment activities pursued by the Trustee Council with respect to injuries incurred resulting from the Incident.

X. Confidentiality

The Trustees agree that it is in the public interest that all scientific data arising out of their review of the injury to natural resources as a result of the Incident be made public. Therefore, such data shall be made public as soon as publication will not prejudice the ongoing assessment. Public sharing of scientific data will be the general policy of the Trustees.

However, all parties to this MOU recognize that all written or oral communications related to the assessment and recovery of damages for injury to natural resources may be undertaken in anticipation of litigation. Accordingly, all oral and written communications and work product will be treated as privileged attorney-client communications, attorney work product or protected by other applicable privilege (or a combination thereof), as appropriate, and will be protected from disclosure to the maximum extent possible under applicable Federal or State law. They further agree that whenever a request for production of such a record is received pursuant to any applicable Federal or State law, the request will be forwarded for response to the Trustee or Trustees to which the privilege applies or whose representatives originally generated or contributed the record requested. Nothing contained herein shall be construed as prohibiting or restraining the Trustees or the Trustee Council from agreeing to release any record.

XI. Reservation of Rights

Except for the confidentiality agreement contained in Section X, all parties understand that this document is not intended to create any further legal rights or obligations between the parties, the Trustees or any other persons not a party to this MOU.

XII. Modification of Agreement

It is acknowledged that additional agreements may be executed by the Trustees with regard to natural resource damage claims that arise and to planning for the restoration, replacement, rehabilitation, and/or acquisition of equivalent natural resources that may be injured, destroyed or lost. Therefore, modification of this MOU must be in writing and upon approval of all Trustees currently parties to the MOU.

XIII. Termination

This MOU shall be in effect from the date of execution until termination by agreement of the Trustees. At any time the Trustees determine that the purposes underlying this MOU have been addressed, the MOU will terminate upon such a finding. In the event any Trustee withdraws from the MOU, such withdrawal must be in writing at least thirty days in advance of the withdrawal. In the event of such withdrawal, this MOU remains in full force and effect for the remaining parties.

In the event of the withdrawal of any Trustee, or at the termination of this MOU, there shall be a full and complete accounting of all funds received, deposited, held, disbursed, managed, expended pursuant to section IX of this MOU, or otherwise controlled in any joint account by the Trustees as a result of the Incident.

XIV. Limitation

Nothing in this MOU shall be construed as obligating the United States, the State or any other public agency, their officers, agents or employees, to expend any funds in excess of appropriations authorized by law.

XV. Third Party Challenges or Appeals

The rights and responsibilities contained in this MOU are subject to the availability of funding and are intended to be guidance for the respective Trustees. They may not be the basis of any third party challenges or appeals.

XVI. Execution: Effective Date

This MOU may be executed in counterparts. A copy with all original executed signature pages affixed shall constitute the original MOU. The date of execution shall be the date of the final Trustee's signature.

Appendix II—Sample Federal/State/Tribal Damage Assessment Plan: Analytical Chemistry Quality Assurance/Quality Control Plan

This Appendix describes an example of a Quality Assurance/Quality Control (QA/QC) plan for analytical chemistry portions of a Damage Assessment/Restoration Plan for an oil spill. This Appendix also provides some minimum requirements for the development of QA/QC plans in Regional/Local Protocols or in Damage Assessment/Restoration Plans for specific oil spills. This can be used in conjunction with existing Analytical Chemistry Quality Assurance Programs of the Trustee Agencies. It describes only those minimum requirements necessary to validate the data generated by analytical chemistry laboratories. QA/QC requirements for other types of measurements are not addressed in this Appendix.

Further instructions in meeting the requirements described in this document should be developed in Regional/Local Protocols or in Assessment/Restoration Plans for specific oil spills. These instructions should include provision for training of field personnel in the collection of samples, methodology for field collection of samples for hydrocarbon analyses, specific chain-of-custody procedures and further detailed validation procedures for the analytical chemistry laboratories.

Table of Contents

1.0 Quality Assurance for Analytical Chemistry
1.1 Study-Specific Quality Assurance Plans
1.2 Technical System Audits
1.3 Standards and Quality Control Materials
1.4 Analytical Performance Evaluations
1.5 Data Reporting and Deliverables
2.0 Minimum Requirements: Sampling and Sampling Equipment
2.1 Sample Identification and Labelling
2.2 Sample Field Chain-of-Custody
3.0 Minimum Requirements: Chemical Analysis
4.0 Minimum Requirements: Reporting and Data Deliverables

1.0 Quality Assurance for Analytical Chemistry

Each trustee agency through their individual standard documented QA programs or through a specifically developed QA/QC plan, shall ensure that all data generated by or for that agency in support of a Damage Assessment/Restoration Plan, are of known, defensible and verifiable quality.

These documented QA programs can include but are not limited to:

NOAA National Status and Trends Program, Mussel Watch Phase: Work/QA Project Plan

Quality Assurance of Chemical Analyses Performance Under Contract with the USFWS

EPA SW–846, Chpt 1, QA/QC Requirements

EPA Guidelines and Specification for Preparing Quality Assurance Project Plans, QAMS–005

In addition, an interagency team of leading scientists from the Trustee agencies, hereafter referred to as the Analytical Chemistry Group (ACG), shall develop and oversee a centralized data management program which will demonstrate the quality and comparability of the chemical data obtained by the Trustee agencies.

The major components of this centralized QA program will be: development of study-specific analytical chemistry QA plans; technical on-site system audits of field and laboratory data collection activities; development and provision of appropriate instrument calibration standards and control materials; laboratory performance evaluations by means of intercomparison exercises; and review of data deliverables and all supportive documentation to evaluate data quality.

1.1 Study-Specific Quality Assurance Plans

Prior to the initiation of each Damage Assessment/Restoration study, the study manager must prepare and submit a study-specific analytical chemistry quality assurance plan (QAP) to the ACG for review and concurrence. This plan shall specify each study's goals, sampling procedures, analytical procedures and all quality control measures associated with those procedures.

The QAP must be study-specific, however any documented QA guidance and/or appropriate Standard Operating Procedures (SOPs) used by the Trustee agencies may form the basis of individual study QAPs.

1.2 Technical System Audits

On-site system audits may be performed without prior notification by the ACG after consultation with the responsible Agency.

1.3 Standards and Quality Control Materials

Appropriate standards and quality control materials will be developed and provided. The National Institute of Standards and Technology (NIST) can provide this service.

1.4 Analytical Performance Evaluations

Prior to the initiation of work, each analytical laboratory will be required to demonstrate its capability. This will be accomplished by providing laboratory documentation on the performance of the proposed methods. Any changes in analytical methodology from that proposed in the original QA plan shall be validated under agency procedures and documented to the ACG.

A series of intercomparison exercises, utilizing blind analyses of prepared materials, extracts of environmental matrices (tissue, sediment and water) or the matrices themselves, will be conducted annually. Participation in these exercises is mandatory. Materials will be prepared by, and data returned to, the provider for statistical analysis. Unacceptable performance will result in the discarding of the associated data.

The ACG will review and provide written reports on the results of intercomparison studies to the Management Team.

1.5 Data Reporting and Deliverables

Data deliverables will be reviewed by the generating Agency to verify the quality of the data. A QC report on each data set will be provided to the ACG for review. All data and associated documentation will be held in a secure place under chain-of-custody procedures until the Trustees indicate otherwise.

2.0 Minimum Requirements: Sampling and Sampling Equipment

Sample collection methodology must be described in SOP's. The method of collection should not alter the samples. Samples shall be held in a secure place under appropriate conditions and under chain-of-custody until the Trustees indicate otherwise.

2.1 Sampling Identification and Labelling

An SOP will be in place for each study which describes procedures for the unique identification of each sample. A sample tag or label will be attached to the sample container. A waterproof marker must be used on the tag or label. Included on the tag are the sample identification number, the location of the collection site, the date of collection and the signature of the collector.

The information above will also be recorded in a field notebook, along with other pertinent information about the collection, and signed by the collecting scientist.

2.2 Sample Field Chain-of-Custody

The field sampler will be personally responsible for the care and custody of the samples collected until they are transferred to another responsible party. Samples will be accompanied by a chain-of-custody record. When samples are transferred from one individual's custody to another's, the individuals relinquishing and receiving will sign, date and note the time on the record. Shipping containers will be custody-sealed for shipment. Whenever samples are split, a separate chain-of-custody record will be prepared for those samples and marked to indicate with whom the samples are being split.

Samples shall be maintained in a manner that preserves their chemical integrity from collection through final analysis. Sample shipper will arrange for sample receipt. After analysis, any remaining sample and all sample tags, labels and containers shall be held under chain-of-custody procedure until the Trustees indicate otherwise.

3.0 Minimum Requirements: Chemical Analysis

The applicable methodology must be referenced or described in detail for each measurement parameter. Method limits of the analytical method in terms of accuracy and precision must be demonstrated. Calibration must be verified at the end of each analysis sequence. Samples must be quantified within the demonstrated linear working range for each analyte. Standard curves must be established with at least 3 points besides 0. Field blanks, procedural blanks, reference materials, replicates and analyte recovery samples must be run at a minimum frequency of 5% each per sample matrix batch. A minimum list of the petroleum hydrocarbon compounds which are to be considered for identification and quantification in water, tissue and sediment include the volatiles, i.e., benzene, toluene, xylene and the polynuclear aromatic and aliphatic hydrocarbons will be provided in the Regional/Local Protocols and in specific Damage Assessment/Restoration Plans.

4.0 Minimum Requirements: Reporting and Data Deliverables

Measurement results as if three figures were significant. Results of quality control samples analyzed in conjunction with the study samples. Documentation demonstrating analytical control of precision and accuracy on an analyte and matrix specific basis.

Appendix III—Judicial Review of the Assessment/Restoration Process

Judicial review of Assessment/Restoration Plans developed pursuant to the procedures eventually specified in the OPA regulations should be conducted on the administrative record. Section 1006(c) of OPA, 33 U.S.C. 2706(c), explicitly provides that the trustees are to develop and implement plans for restoration of natural resources injured by oil spills. OPA does not define the standard of review for selection of assessment/restoration plans. Under general principles of administrative law, where a statute does not provide an explicit standard of review for non-adjudicatory agency action, the standard of review is provided by the Administrative Procedure Act (APA), 5 U.S.C. 706(2)(A). *See American Paper Institute, Inc.* v. *American Electric Power Service Corp.*, 461 U.S. 402, 412 n.7 (1983); *Camp* v. *Pitts*, 411 U.S. 138, 142 (1973); *Citizens to Preserve Overton Park* v. *Volpe*, 401 U.S. 402, 413–14 (1971). The APA requires reviewing courts to sustain agency actions unless they are "arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law." 5 U.S.C. 706(2)(A). The scope of review is limited to the administrative record in existence when the action was taken. See *Florida Power & Light* v. *Lorion*, 470 U.S. 729, 743–44 (1985); *Camp* v. *Pitts*, 411 U.S. at 142; *Citizens to Preserve Overton Park* v. *Volpe*, 401 U.S. at 420.

The proposal to develop an administrative record in order to document the selection of the assessment as well as the restoration plans finds support in the history of the selection of response actions by EPA under CERCLA. Prior to the enactment of the statutory provisions providing for judicial review, on the administrative record, of EPA's selection of response actions (section 113(j) of CERCLA, 42 U.S.C. 9613(j)), EPA adopted as policy the use of administrative record to document it's selection. The CERCLA provision, added by the Superfund Amendments and Reauthorization Act of 1986, Public Law 99–499, 100 Stat. 1647 (1986) merely clarifies and confirms several cases holding S. Rep. No. 11, 99th Cong., 1st Sess. 57 (1985); H.R. Rep. No. 253, Pt. 1, 99th Cong., 1st Sess. 82 (1985). Thus, prior to the explicit provisions of section 113(j) of CERCLA, it was well established that judicial review of selection by EPA of response action under CERCLA was based upon the administrative record using an arbitrary and capricious standard of review. See *United States* v. *Seymour Recycling Corp.*, 679 F. Supp. 859, 861 (S.D. Ind. 1987); *see also United States* v. *Northeastern Pharmaceutical & Chemical Co., Inc.*, 810 F.2d 726, 748 (8th Cir. 1986); *United States* v. *Ward*, 618 F. Supp. 884, 900 (E.D.N.C. 1986), *United States* v. *Western Processing Co.*, No. C83–252M (W.D. Wash. Feb. 19, 1986) (1986 Westlaw 15691); *cf. United States* v. *Ottati & Goss, Inc.*, 900 F.2d 429, 434–36 (1st Cir. 1990) (administrative record review not required where government seeks injunctive relief under CERCLA); *United States* v. *Hardage*, 663 F. Supp. 1280, 1284 (W.D. Okla. 1987) (same).

Like earlier provisions of CERCLA, OPA does not require NOAA to document its selection of the assessment or restoration plan to be on the record nor does OPA require that judicial review be limited to the record. Nevertheless, NOAA may impose a regulatory requirement on the trustees to document selection on the record. Absent statutory language otherwise, whether judicial review will be on the administrative record is yet to be determined.

There are important policies underlying record review of assessment/restoration measures under OPA, as for response action under CERCLA. First, record review is necessary to carry out the congressional mandate that trustees select assessment/restoration measures. See 33 U.S.C. 2706(c). Congress intended that the Assessment/Restoration Plan be developed and implemented by the trustees pursuant to an administrative process, not by a courtroom battle of experts. See 33 U.S.C. 2706(c). Adequate evaluation of the complex

scientific issues involved in assessment/restoration is more likely to result from a public administrative process conducted by agencies with specialized scientific expertise. See, *e.g., United States* v. *Seymour Recycling Corp.*, 679 F. Supp. at 862 (technical and policy considerations involved in CERCLA response actions are entrusted to agencies with special expertise); *see generally, Marsh* v. *Oregon Natural Resources Council*, 109 S. Ct. 1851, 1860–61 (1989) (deferring to administrative agency on questions involving "technical expertise" and "scientific determination[s]").

Second, record review may be necessary to give effect to the congressionally-mandated public participation requirements of OPA. In the CERCLA context, the courts have recognized that trial *de novo* of response action is inconsistent with meaningful public involvement in selection of remedies for hazardous waste sites. *See United States* v. *Seymour Recycling Corp.*, 679 F. Supp. at 863. The general public does not have the resources or the procedural vehicle to protect its interests in the courtroom. Trial *de novo* is also more likely to become a contest between interest groups. Furthermore, trial *de novo* of assessment/restoration measures creates significant incentives for parties to withhold scientific data for use at trial. One of the most significant criticisms of the *Exxon Valdez* case noted by commenters was the unavailability of scientific data produced by the parties to the litigation. A public administrative process may create precisely the opposite incentive. The government will be required to publicly disclose its scientific data and conclusions in the administrative record developed in connection with the Assessment/Restoration Plan. Other parties will be required to publicly disclose their scientific data and conclusions in connection with the administrative development of the Assessment/Restoration Plan or risk waiving their objections to the Plan. Third, the development of an Assessment/Restoration Plan will result in a thorough and complete process geared towards the restoration of injured resources in a timely manner. As such, the assessment portion of the plan may be considered an interim agency decision and not eligible for judicial review. The development of the Restoration Plan will constitute a final agency action and will avoid a disjointed, piece-meal review of the assessment/restoration process. Also appropriate for discussion at this point is the concept that by fulfilling the public review and open record requirements throughout the entire assessment process, the trustees have also met the requirements of other environmental statutes. For example, the public involvement in this planning process may constitute a "functional equivalent" of the process required by the National Environmental Policy Act.

While it may be preferable that the record review standard apply to the entire assessment process, it is possible that concerns could be raised that economic damages (diminution of value) are not appropriate for record review. In the CERCLA context, some parties have argued that there is an inconsistency between administrative record review of restoration measures and the right to jury trial under the Seventh Amendment to the United States Constitution. Where the government has sought natural resource damages for both restoration costs and lost use and non-use values under CERCLA, several courts have held that there is a right to a jury trial. *See United States* v. *City of Seattle*, No. C90–395WD (W.D. Wash. Nov. 28, 1990); *In re Acushnet River & New Bedford Harbor: Proceedings re Alleged PCB Pollution*, 712 F. Supp. 994, 1000 (D. Mass. 1989); *United States* v. *Allied Chemical Co.*, No. C–83–5898 (N.D. Cal. Sept. 14, 1984).

These decisions should pose no obstacle to administrative record review of Assessment/Restoration Plans under OPA. First, oil spills from vessels fall within the admiralty jurisdiction of Federal courts where traditionally there is no right to jury trial. See, Rule 9(h) and Rule 38(e) of the Fed.R.Civ.P. See also, *United States* v. *Redwood City*, 640 F.2d 963, 969–70 (9th Cir. 1981) (pollution is a maritime tort wholly aside from any statutory bases of liability); *United States* v. *M/V BIG SAM*, 681 F.2d 432, 443 (5th Cir. 1983) (same). Moreover, spills into navigable waters squarely fall within the Supreme Court's general tests regarding admiralty jurisdiction. See, e.g., *Sission* v. *Ruby*, 497 U.S. ——, 111 L.Ed. 2d 292 (1990); *Foremost Ins. Co.* v. *Richardson*, 457 U.S. 668 (1982); *Executive Jet Aviation* v. *City of Cleveland*, 409 U.S. 249 (1972). Even marine spills into navigable waters which ultimately cause shoreside damage would also be within the admiralty jurisdiction of the Federal courts. Extension of Admiralty Act, 46 U.S.C. 740. Second, to the extent that other types of cases fall outside admiralty jurisdiction, no right to jury trial attaches to the components of the government's claim for natural resource damages, which are restitutionary in nature. *United States* v. *Wade*, 653 F. Supp. 11, 13 (E.D. Pa. 1984). Finally, where certain claims would otherwise be tried to a jury at common law, Congress can entrust those claims to determination by administrative agencies. The Supreme Court has repeatedly held that "the Seventh Amendment is not applicable to administrative proceedings." *Tull* v. *United States*, 481 U.S. 412, 418 n.4 (1987); *Chauffeurs, Teamsters and Helpers, Local No. 391* v. *Terry*, 110 S. Ct. 1339, 1345 n.4 (1990); *Atlas Roofing Co.* v. *OSHA*, 430 U.S. 442, 454–55. Thus, there is no constitutional impediment to effectuating the congressional intent that the trustees, not juries, determine the components of an Assessment/Restoration Plan. See 33 U.S.C. 2706(c).

For purposes of discussion in this Notice, if there is a right to jury trial over certain components of a natural resource damage claim under OPA, this right might easily be accommodated through carefully drawn jury instructions and established case management techniques. The right to a jury trial on certain components of a claim does not prevent the court from reserving to itself decisions on other equitable or administrative review components of claims. See, *e.g., Tull* v. *United States, supra.*

Trial of a natural resources claim under OPA may require integration of both administrative record review of the Assessment/Restoration Plan and the rebuttable presumption for the trustees' calculation of damages. See 33 U.S.C. 2706(e)(2). The factfinder, be it court or jury, will determine liability. The court has ample authority under the Federal Rules of Civil Procedure to bifurcate or consolidate the components of the case in the interest of resolving the litigation.

[FR Doc. 92–5845 Filed 3–12–92; 8:45 am]
BILLING CODE 3510–12–M